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HUMANISTIC CARING:
PERSONAL INFLUENCES, COPING PROCESSES,
PSYCHOLOGICAL OUTCOMES AND COPING EFFECTIVENESS

by

Christine Lynn Latham

Doctor of Nursing Science
University of San Diego
1990

Dissertation Committee

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Abstract

Using a stress-coping theoretical framework, this path analytic study revealed personal influences and outcomes of caring by nurses from a patient's perspective. Rating the amount of humanistic caring from a specific nurse who had the greatest effect on them during their current hospital admission, this sample of 120 adult, hospitalized, medically-treated patients, between 25 to 65 years of age indicated that a moderate amount of caring tended to be beneficial. The personal factors which influenced these ratings included the desire to be kept informed, age, and pain perceptions. Younger patients, individuals who desired more cognitive control over health care, and those reporting severe pain had more positive evaluations of nurses, while those with lower self-esteem levels tended to perceive more threat and psychological distress from these interactions.

Following positive caring experiences with nurses, most patients reported minimal threat, increased availability of alternative coping options, and use of coping strategies which improved their ability to cope effectively. Other personal factors, such as age, levels of self-esteem, and pain, influenced patients' outcomes following encounters with nurses. Younger patients, who tended to desire more cognitive and behavioral control over health care, reported a

greater range of alternatives to deal with nurse encounters. On the other hand, low self-esteem individuals and those with severe pain used more emotion-focused coping strategies which resulted in less effective coping outcomes. Overall, caring, along with coping strategies and decreased psychological distress levels, explained over 40% of the variance of hospitalized patient perceptions of being able to cope effectively following their encounters with nurses.

The study implies that future research of personal characteristics of patients may enhance our understanding of their perceptions of caring by nurses, use of coping strategies, and resultant outcomes. Continued study of nursing attitudes and interpersonal competence is also warranted. In addition, increased emphasis could be placed on educational program inclusion of the unique caring role of nurses, as well as ways to improve resources and rewards for caring within the profession and health care system.

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DEDICATION

To Martin,

For his constant support of my dreams

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I wish to acknowledge the contributions of my dissertation committee members and the support of family, friends, and colleagues to the completion of this dissertation.

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Dr. Marsha Fowler served as a content person on my committee, and provided valuable assistance during early validity estimation of the Holistic Caring

Inventory and guidance during the critical analysis of the theoretical component of the dissertation. Dr. Fowler also served as a co-sponsor on my National Research Service Award.

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Chapter One

Introduction

Background of Problem

The history of health care within hospitals is replete with depictions of dehumanizing practices (Vail & Miller, 1966). The institutional environment has created barriers to caring as a result of ritualization, bureaucratization, and an emphasis on technology (Leininger, 1974). The rigid routine, air of hopelessness, and poorly-understood, complex social environment leads to a sense of patient displacement, stress, and isolation (Lemert, 1962). Health care providers often expect patients to assume a passive, compliant role while hospitalized (Matthews, 1983). Recent changes in health care, such as increased consumer demands for competent, accountable caregivers (Downie & Tefler, 1980), more frequent use of half-way technology (Gaylin, 1976; Winner, 1983), escalating economic competitiveness, and continued domination by the medical-industrial-insurance enterprise (Moccia, 1988) have led to patient demands for an increased emphasis on human interests instead of the current focus on cost-effectiveness, efficiency, and a technical-purposive rationality (Ray, 1981).

There is evidence that these demands have not been met, since patients continue to be dissatisfied with health

care provider interactions (Bailey, 1985; Blundell, 1987; Bores, 1985; Roraback, 1987). Regardless of the environment, patients are thought to be extremely sensitive to both positive and negative aspects of caregiver communication (Friedman, 1979). Caring health care providers respect patients as persons with needs or concerns worthy of professional attention (Latham, 1988).

Nurses, the chief professional workforce within health care (Elder, 1983), value interpersonal caring to decrease negative patient reactions. They attempt to provide care continuity and interpersonal support of patients in order to prevent harmful, depersonalizing effects (Henderson, 1985). However, changing competencies and increased responsibilities demanded by advances in health care technology and the relative lack of nursing control over its own hospital-based practice is threatening nurses' ethic of caring (DeVries, cited in Selby, 1987; Fry, 1988). As a result, nurses have described their unique role as "caring professionals" in order to preserve this component of their practice.

Behavioral scientists and theorists' descriptions of caring attest to the importance of maintaining it as a primary nursing practice focus (Leininger, 1986). Structural-functional (Watson, 1979), philosophical and action-based (Gaut, 1983, 1986), and humanistic theories (Howard, 1975) of caring have laid a foundation for understanding its complexity. Phenomenological nursing

research has reported personal perspectives of and life changes made by patients as a result of caring interactions with nurses (Benner & Wrubel, 1989), as well as patient depictions of nurse caring behaviors (Brown, 1981, 1986; Henry, 1975; Larson, 1981, 1984, 1986). Other studies, building on descriptive research and theoretical formulations, have measured caring from nurse and patient perspectives (Gardner & Wheeler, 1987; Larson, 1981; Latham, 1988).

Patient perspectives vary, and are influenced by a variety of factors. For example, research results have indicated that patient evaluations of health care provider behavior are affected by patients' needs to feel in control (Auerbach, Martelli, & Mercuri, 1983; Shiloh, 1972) and their level of self-esteem (Hull, 1982). In addition, negative effects resulting from noncaring interactions are not apparent if patients use effective coping strategies (Drew, 1986). Given the improved understanding of caring and the ways in which it may be evaluated, and in light of the increasing threat to its continued practice by nurses, it has been suggested that there be an increased focus on patient outcomes following caring interactions by nurses (Wolf, 1986).

What are the consequences of caring interactions? Inpatient outcomes, studied as satisfaction and hospital (situational) stress, are somewhat linked to caring, but have limited applicability. This is due to the development

of insensitive satisfaction measures (Fitzpatrick, 1984; LaMonica, Oberst, Madea, & Wolf, 1986; Locker & Dunt, 1978; Ventura, Fox, Corley, & Mercurio, 1982) and an emphasis on operationalizing hospital stress as patient situations commonly encountered during most admissions (Volicer, 1973; Volicer & Burns, 1977). Recent research results indicate specific consequences of noncaring interactions with health care providers, such as decreased energy levels and psychological distress (Anderson, 1981; Drew, 1986). Thus, this study will build on previous research results while emphasizing the vital link between humanistic caring by nurses and patient-reported outcomes.

Purpose of the Study

The proposed study has two aims. This predictive correlational study will investigate both intra- and interpersonal factors influencing and resulting from patient-nurse interactions from the patient's perspective. It is proposed that cogent personal characteristics of patients (general level of self-esteem and need for control while hospitalized) will affect their perceptions of humanistic caring by nurses which, in turn, will influence appraisal and coping strategies and ultimately, psychological distress and other feelings about how the experience was handled (i.e., coping effectiveness).

The second purpose of the study will look at group differences between older and younger respondents on predictor and outcome variables. The research question

posed to answer this aim of the proposed study is: Do age differences affect the above variables in this population? Patients' impressions of hospital-based nurses could help to create a better image for the profession since approximately 70% of the nursing workforce is employed by these institutions (Elder, 1983).

Theoretical Framework

Lazarus and Folkman (1984) have developed a theoretical framework which explains the relationships of variables in the proposed model. This general, grand theory defines perceived stress as "transactions that tax or exceed the person's resources," such as a "strained relationship" (p. 307). These transactions may be studied from physiological, sociological, or psychological perspectives. Although these perspectives are not mutually exclusive, at this time, partial independence of each level has been described in early research (Pearlin, cited in Lazarus & Folkman, 1984). Although this study will focus on the psychological perspective, the other two domains will be briefly summarized.

Each of the above three domains includes four broad dimensions: Causal antecedents, mediating processes, immediate and long-range effects. For example, in the physiological domain, causal antecedents, such as genetics and other risk factors, are mediated by immunity and vulnerability. This may result in immediate effects, such as somatic changes, and acute or chronic illness.

Sociological causal antecedents may include social networks, socioeconomic status, and role patterns. These are mediated by the availability of social supports (institutional and personal). Lack of social support could immediately result in social disturbances or alienation or in long-term effects, such as social revolution, change, or network changes. This study is limited to the psychological domain, so these relationships will be stressed.

The first dimension of the psychological focus, causal antecedents, includes personal and situational variables. Personal variables refer to "values and beliefs, such as personal control" (Lazarus & Folkman, 1984, p. 308). In this study, these variables include self-esteem levels and the desire for personal control while hospitalized. Research verifies the importance of the influence of these variables on patient perception of health care situations, including interpersonal encounters with nurses.

Situational variables will include humanistic caring by nurses. This type of caring could be an interpersonal resource or stressor, depending on the degree to which it is present or absent. If present, it could help the patient to cope with hospital-based expectations. If caring is not apparent, the patient must deal with the foreign, depersonalized, technological environment of the hospital, which may lead to increased psychological stress and ineffective adaptation.

The second major dimension within the psychological domain, mediating processes, includes the way in which the individual cognitively appraises the situation (degree of threat and vulnerability) and uses coping methods. Therefore, both cognitive appraisal and coping strategies will mediate patient impressions of humanistic caring and their final psychological outcomes.

The third and fourth dimensions within the psychological domain of this theory relate to the affective and self-evaluation outcomes of the stressful encounter. The third dimension in the psychological domain, immediate effects, refers to subsequent feelings or judgments regarding the overall outcome, while the fourth dimension deals with long-range effects, e.g., the person's morale and level of functioning in the world. The long range effects of caring interactions included in the fourth dimension will not be considered at this time, since only transient outcomes have been described by patients, such as the presence or absence of psychological distress and perceived coping effectiveness.

This theory assumes reciprocal, interactive relationships among all four dimensions. However, evidence from previous research examining links between the variables in the proposed model indicates a unidirectional path of causal relationships. The proposed model and theory have one interesting similarity: the time ordering of the suggested research relationships of the variables in

the path analytic model is congruent with the categorical ordering of concepts in the Lazarus and Folkman (1984) psychological stress theory. However, not all of the concepts identified by the theory of psychological stress will be measured in this study, and those that have been selected will assume a logically-ordered, previously-substantiated, one-way causal sequence. This will establish a definite model which may be used to describe patients' potentially positive outcomes resulting from humanistic caring by nurses, as well as their ability to cope with noncaring, potentially stressful interactions. A future research goal would include the testing of competing, reciprocal models.

Theoretical Definitions of the Variables in the Proposed Model

The following conceptual definitions of the above variables form the basis for a discussion of hypotheses and previous investigations. Each variable is addressed according to its position in the model, as depicted in Figure 1.

Desire for control. The desire for control refers to an individual's preference to participate in directing a particular situation. In relation to health care, Krantz, Baum, and Wideman (1980) indicate that this need for control reflects patient expectations of professional providers as well as attitudes about self-care participation. These beliefs about health care include

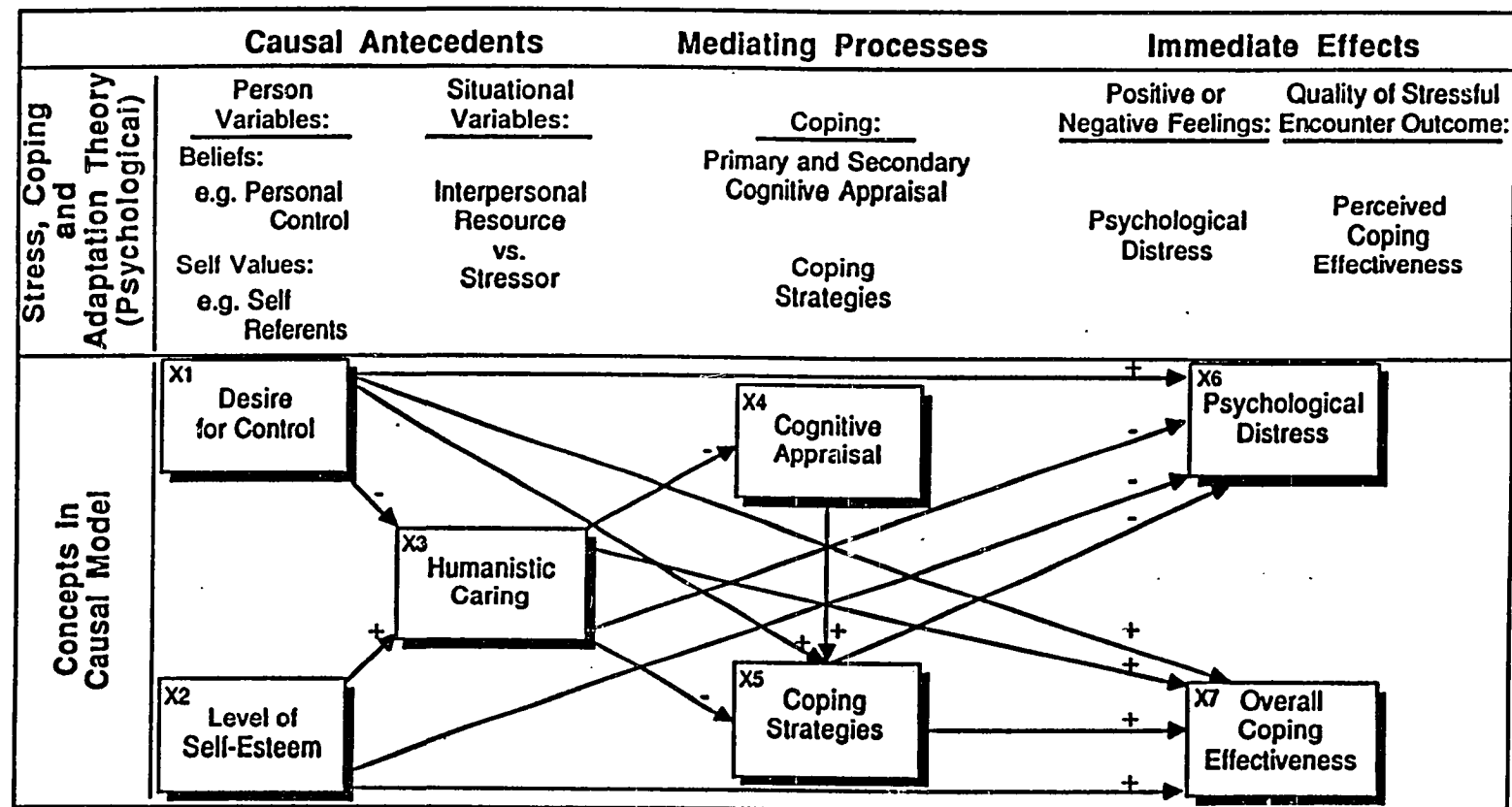


Figure 1. Correspondence of the Proposed Model to Theoretical Concepts

cognitive control, or knowledge and decisional involvement, which may require information from professionals and behavioral control, or self-reliance through active participation, which opposes complete dependency on professional assistance. The desire for control reflects attitudes about and past involvement in health care situations, and does not refer to more general, personal control constructs, such as internal versus external loci of control (Lowery, 1981).

Self-esteem. Self-esteem is considered to be the affective portion of the self-concept (Stanwyck, 1983). It is also called self-regard and self-image, and is believed to reflect an individual's feelings about accomplishments and appraisals of others (Wells & Marwell, 1976). Rosenberg (1965) equated self-esteem to self-acceptance, a basic feeling of personal worth which develops throughout childhood, and becomes relatively stable by late adolescence (Marsh, Barnes, Cairns, & Tidman, 1984). Self-esteem results from a lifelong process (Coopersmith, 1981), and becomes more constant with increased age (Hamachek, 1978). However, illness or other long-term life changes have been associated with lower levels of self-esteem (Antonucci & Jackson, 1983).

Self-esteem is one component of the self-concept, which includes other dimensions, such as physiological and social self-perceptions. These dimensions will be discussed as coping effectiveness.

Humanistic caring. The practice of humanistic caring emphasizes the importance of treating the patient as a person, and the "interrelatedness of person, environment, and inner self" (LaMonica, 1985, p. 360). Howard (1975) proposed a comprehensive model to explicate the components of humanistic caring within health care which was supported by subsequent nursing behavior research (Fenton, 1987; Gardner & Wheeler, 1981; 1987; Latham, 1988). This model has three major domains. The ideological domain refers to two dimensions of caring. It includes treating patients as whole persons along an unfragmented social-psyche-body-spiritual continuum, while respecting them as unique individuals with inherent worth. Another component of this model, called the structural domain, has two dimensions, egalitarianism (status equality or equal parity as a person) and patient rights and privileges (e.g., the freedom to decide and act). The last domain refers to the provider's affective behavior when interacting with patients. Thus, humanistic caring reflects the professional health care provider's empathic, holistic approach to the patient which recognizes the individual's equality, inherent worth, and freedom to decide and act.

Cognitive appraisal. Cognitive appraisal specifies the relevance of a potentially stressful encounter as beneficial, threatening, or irrelevant to the person's well-being (Folkman & Lazarus, 1985; Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986, p. 992).

Although it is divided into two processes, primary and secondary appraisal, these two types of situational evaluation occur simultaneously. Primary appraisal reflects an individual's interpretation of the potential threat of the interpersonal interaction. Folkman et al. (1986) maintain that transactions may be threatening, in a way that incurs harm or loss. If the situation is defined as irrelevant, then "the person has no stake in its outcome," and it "has no significance" for the individual's "well-being" (Folkman & Lazarus, 1985, p. 152). Secondary appraisal further clarifies general coping options that the individual feels could be used in that particular situation (e.g., tolerate, adapt to, or change a situation).

Coping strategies. This study will attempt to uncover ways in which patients deal with short-term interactions with nurses by using a coping framework identified by Pearlin and Schooler (1978). This coping framework identifies three possible types of strategies that could be used in potentially stressful encounters: Methods to alter the stressful situation, control the meaning of the encounter in a way that neutralizes its negative components, or simply withhold action and attempt to manage the subsequent stressful feelings (Pearlin & Schooler, 1978; Quayhagen & Quayhagen, 1982). This type of coping framework is relevant to short-term transactions (Folkman et al., 1986), such as those occurring between nurses and hospitalized patients.

Psychological distress. Psychological distress refers to discomforting emotions which have been elicited from patients undergoing medical or psychiatric treatment. Symptom patterns form nine categories which may result from stressful experiences (Derogatis, 1977). These include feelings of uneasiness when with others, depression, anxiety, anger, avoidance or escape behaviors, unremitting thoughts, emotionally-based body dysfunction, and other disordered thinking. These psychological symptoms may be temporary reactions to interpersonal interactions and follow coping strategies that were used to deal with untoward situations (Folkman et al., 1986).

Coping effectiveness. This has been conceptually defined as the degree to which coping strategies influence a person's well-being and level of functioning (McNett, 1987). Well-being outcomes refer to psychophysiological components. The functional outcomes include self-appraisal of adaptation to a stressful encounter, such as having a sense of control and adequate ability to meet demands (McNett, 1987). These outcomes are based on psychological, social, and physiological components that determine if coping behaviors are effective or adaptive (Lazarus & Folkman, 1984). These components compose the three major dimensions of the non-academic self-concept (Shavelson, Hubner, & Stanton, 1976), and are called "functional" or transient, situationally based self-perceptions (Crouch & Straub, 1983). These

components are based on self-evaluations of what is important to effectively adjust to a particular situation (Cohen & Lazarus, 1979), and satisfy both the well-being and functional outcomes associated with effective coping (McNett, 1987).

Hypotheses

The proposed model implies 21 direct hypotheses but only 14 are expected to reach significance. Seven indirect hypotheses will also be tested. The following hypotheses are proposed:

Desire for control will have a direct negative effect on humanistic caring and a direct positive effect on coping strategies, psychological distress, and overall coping effectiveness. It will indirectly affect cognitive appraisal through its influence on humanistic caring.

Self-esteem will have a direct positive effect on humanistic caring and coping effectiveness, and a direct negative effect on psychological distress. It will indirectly affect cognitive appraisal through humanistic caring, and similarly, coping strategies will be influenced through humanistic caring and cognitive appraisal.

Humanistic caring will have direct negative effects on cognitive appraisal, coping strategies, and psychological distress, while having a direct positive effect on coping effectiveness. It will also indirectly affect psychological distress and coping effectiveness through cognitive appraisal and coping strategies.

Cognitive appraisal will have a direct positive effect on coping strategies and will indirectly affect psychological distress and coping effectiveness through coping strategies.

Coping strategies will have a direct negative effect on psychological distress and a direct positive effect on coping effectiveness.

Significance for Nursing

Even while nurses declare that caring is fundamental to their profession (Leininger, 1980), technological and economic imperatives threaten its continued practice within the health care system (Buerhaus, 1986; Harding, 1980; Moccia, 1988). For example, the person needing hospitalization is more likely to experience fragmented care due to worker specialization, and feelings of depersonalization resulting from increased mechanization and decreased contact with caring professionals (Birckhead, 1978; Braillier, 1978). The "high touch" which should accompany "high tech" is not always evident in this environment (Naisbett, 1984, pp. 35-52). However, the public is now demanding a more holistic, personal interaction with professional providers in the face of high financial costs and the increased possibilities for side effects from half-way technology (Rosch & Kearney, 1985). Nurses, attempting to meet these expectations, must deal with professional barriers to humanistic caring in their practice.

For example, there are a number of historical nursing issues which influence current dilemmas regarding caring. These include nursing's Victorian roots (Hughes, 1980), its woman-worker base in a patriarchal health care system (Chinn, 1980; Melosh, 1982; Reverby, 1987), the ineffective use of interpersonal skills and lack of adequate communication strategies (Benner, 1984; Carter, 1983; Menikheim & Meyer, 1986), educational disunity and lack of consistency in instruction of caring (Christman, 1983), and the lack of work autonomy which results in nurses' inability to control their own practice (Melosh, 1982; Reverby, 1987). In addition, the public does not understand nurses' work responsibilities and caring goals (Kalisch & Kalisch, 1986). As a result, nursing's image is not equated with caring, and resources needed to insure its survival (professional and administrative support) are lacking (Leininger, 1986). The nursing shortage and newly-introduced proposals to train less educated, technical workers (registered care technologists) are two current issues which further threaten humanistic caring by nurses (Aiken & Mullinix, 1987; Secretary's Commission on Nursing, 1988).

This is an opportune time to determine the public's perspectives on caring by nurses for several reasons. Nurses have described caring (Leininger, 1981; Watson, 1985), and studies have indicated that it is valued by patients (Hall, Roter, & Katz, 1988) who indicate positive

reactions to its presence and negative outcomes if it is lacking (Anderson, 1981; Drew, 1986). It is nurses' responsibility to evaluate their own practice, with an emphasis on outcomes (American Nurses' Association, 1976). If caring is present in nurse-patient relationships, evidence of positive outcomes will justify implementing methods to ensure its continued practice. If caring is not present, nurses need to re-emphasize its worth and attempt to incorporate it in their relationships with patients (Paulen & Rapp, 1981). Over time, improved nurse-patient relations will possibly increase nursing power (Benner, 1984), nurses' rights to caring resources may receive more attention (Griffen, 1983), and public acknowledgement of nursing practice goals may improve nurses' image (Constable & Russell, 1986; Leininger, 1986). As a result, the public may increasingly value nurses' personalized, concerned approach to patient care over the interventions of less educated, technically-based workers, thereby improving nurses' ability to establish and sustain continuity of relationships with patients (Englehardt, 1985).

This study will be implemented in the hospital setting, a major site of health care delivery (One in seven, 1988), which employs 70% of the nursing workforce (Elder, 1983). As large numbers of patients and their families encounter caring nurses in these settings, it may help to improve nursing's public image, creating increased future support of and interest in the profession.

Chapter Two

Review of the Literature

Previous research has addressed relationships between the variables in the psychologically-based humanistic caring model, and substantiates the hypotheses listed in Chapter One. The following discussion is organized according to the position of each variable in Figure 2, and is based on previously-discussed conceptual definitions.

The Relationship of Desire for Control and Humanistic Caring

The cognitive component of patients' desire to control health care situations has received more attention than the behavioral component. Cognitive control, or the expectation that health care providers will provide information, has been found to be a crucial factor which affects patients' impressions and subsequent evaluations of health care providers. The behavioral component of control, which relates to patients' expectations for health care participation, has also been linked to caregiver evaluations. The relationship between the cognitive component of patients' desires for control and evaluation of health care providers will be discussed first.

Cognitive control. Patient satisfaction studies have dealt with patient cognitive control expectations and

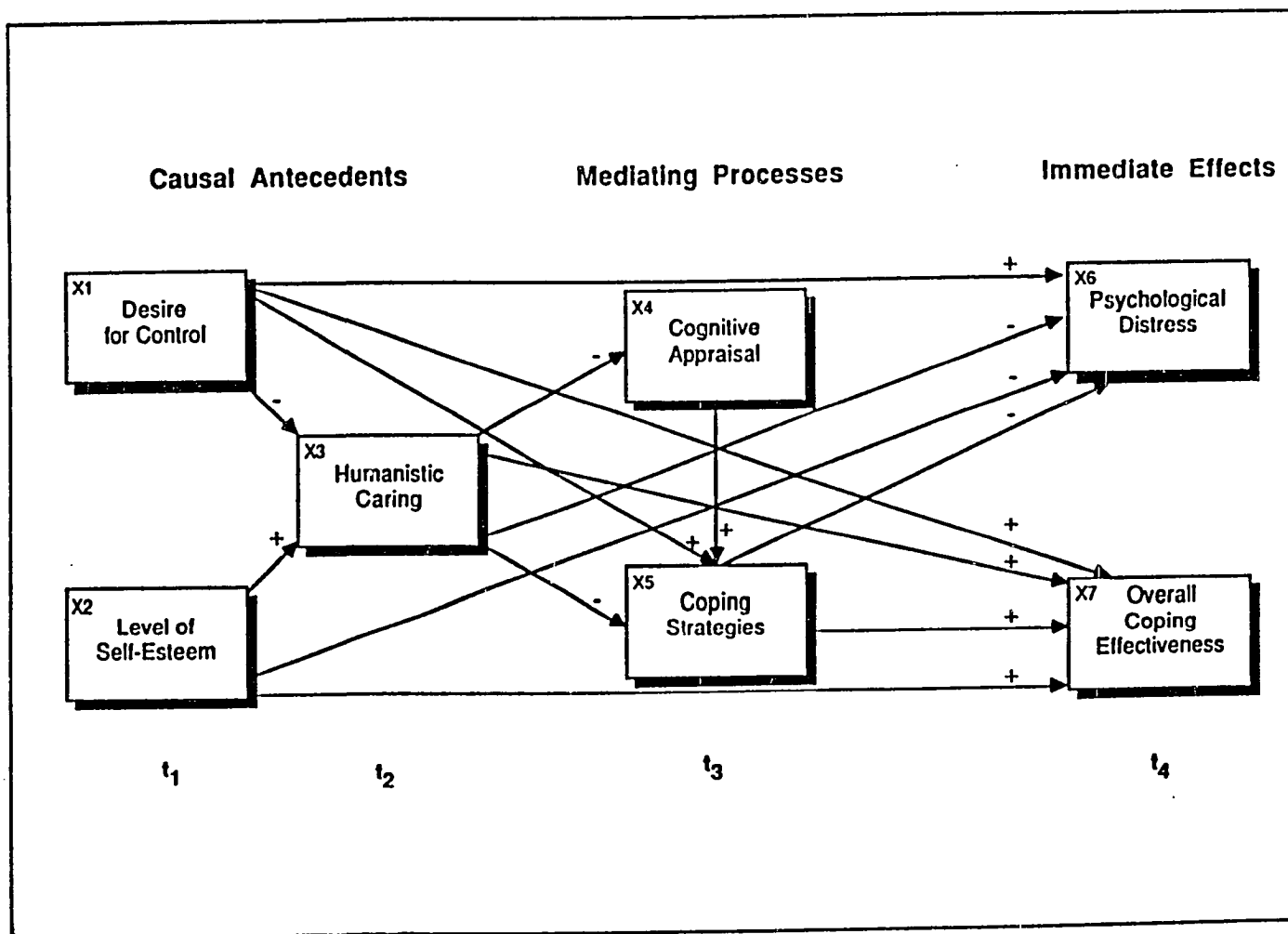


Figure 2. Humanistic Caring Model

subsequent evaluation of health care providers.

Larson and Rootman (1976) found that fulfilled expectations of physician information-giving tended to result in higher patient satisfaction ratings of their interpersonal competence. However, a later study found that patient expectations of doctors' behaviors (including the provision of information), values, and feelings about their entitlement to health care services accounted for less than ten percent of satisfaction ratings (Linder-Pelz, 1982). Most of the patient satisfaction studies used idiosyncratic questionnaires (Locker & Dunt, 1978), and a new process conceptualization of satisfaction did not support these methodological designs. It was suggested that patient expectations must be measured separately (and prospectively) from their evaluations of health care providers (Benbenishty, 1987; Fitzpatrick, 1984).

The premise for defining satisfaction as a process was based on the results of large studies using patient interviews and tape recordings of recipient-provider interactions. For example, the classic study by Korsch, Gozzi, and Francis (1968) determined that patients expect warm, humane treatment by caregivers, and want their questions or concerns addressed. A majority (76%) of the 800 subjects followed in this study reported positive evaluations of health care providers. However, providers who ignored or gave inadequate responses to patient questions or unclear explanations of their illness did not

meet patient expectations for cognitive control, and were negatively evaluated. Most demographic characteristics (socioeconomic status, ethnicity, religious background) were not significantly different between positive and negative caregiver evaluation groups. However, those with higher education were more apt to express concerns, which could then be addressed by the physician.

All of the above studies concentrated on patient satisfaction with physician care, and nurse investigators contended that a different focus was needed to evaluate patient satisfaction with nursing care (Risser, 1975). Separate measures were devised for this purpose. However, all three subscales on the Risser Patient Satisfaction Instrument, including patient evaluation of nurses' care competency, communication skills, and provision of information, were highly intercorrelated in subsequent nursing research (Hinshaw & Atwood, 1982). This makes it difficult to determine the effect of patient control expectations on later evaluations of nurses, since these studies did not independently measure these two components. Due to the lack of response variability (consistently negatively-skewed answers), and the Risser Tool's insensitivity to major differences in nursing care modalities (team versus primary care), researchers concluded that patient satisfaction is not an adequate measure of patients' evaluation of nursing care (Ventura et al., 1982). Furthermore, the Risser Tool's sensitivity was

similar to that reported for other patient rating scales of nurse satisfaction (LaMonica et al., 1986).

Given these difficulties with satisfaction research, other studies devised more specific approaches to differentiate patient expectations and later evaluations of health care professionals. For example, psychology researchers systematically considered the effect of patient cognitive control preferences on later caregiver evaluations. In a quasi-experimental study, patients were found to rate the caregiver as friendlier and more concerned if information needs were met (Auerbach et al., 1983). Patients were randomly assigned to general or specific presurgical information sessions. If the patient wanted cognitive control and was assigned to the information session that provided more specific information, the caregiver was evaluated as being friendly. Whereas, if patients in these same sessions had a low preference for information (low control needs), the caregiver was rated as hostile. The desire for control (e.g. receiving various types and amounts of information) played a significant role in patient evaluations of health care personnels' caring behavior.

Behavioral control. Behavioral control was also studied as a component of patient expectations of hospital experiences. A classic inpatient study verified the influence of patients' behavioral control needs on later evaluations of caregivers (Shiloh, 1972). Interviews with

60 hospitalized patients in an acute care facility found that respondents had two distinct impressions of health care professionals based on their desire to be involved with their care. One group, called "equalitarians," tended to favor participation and wanted information (e.g., reasons behind tests and treatments) and a role in decision-making (p. 256). In addition, these patients had higher demands for personalized, caring interactions with professional health care providers than other, more passive patients. They tended to resent the submissive patient role and were irritated by health care providers who did not keep them informed about and involved in their care.

In contrast, the other patients, called the hierarchal group, were found to feel subservient to health care professionals and tended to be grateful for any attention, even if it was depersonalizing. They usually had low expectations for health care professionals, and often turned to non-professional personnel (e.g., housekeeping) for support. These patients also assumed a passive role, allowing others to make decisions regarding their health care. Both the behavioral and cognitive control factors were important discriminators between the two groups (demanding versus accepting) that influenced their evaluation of health care personnel. It is interesting that these two groups are still labeled by health care providers as "good" patients (implying helplessness and passivity of the hierarchial group) or "bad" patients (who

are seen as demanding, and fit the equalitarian group description) (Schorr & Rodin, 1982). Other recent studies, which discuss patient control desires, identified important facets of control while recipients were hospitalized.

One of these studies delineated the types of situational control preferred by hospitalized patients, and found that control needs are multidimensional. Sixty medically- and surgically-treated patients used a Q-sort technique (with 47 items) in response to two questions (Dennis, 1987). The answers to the first question (what the patient felt was important to get well and be discharged) were similar to responses to the second question about factors that would improve their hospital stay.

The results indicated three general areas of patient control. These three areas included cognitive information about the patient's role (procedural, lifestyle, and physical change information), decisional control (related to the patient role and decisions about self-care), and interpersonal concerns while in the patient role (e.g., expectations of interactions, maintaining personhood, and environmental issues). This last factor was indicated by patients in response to the second question (a more pleasant stay). Convergent validity was evident with simultaneous administration of the Krantz Health Opinion Survey (KHOS), which highly correlated with patient role concerns (Krantz et al., 1980). This study revealed a

great deal about patients' expectations of control, linking them to interpersonal interactions with professionals. It supported patients' expectations for participation in health care while hospitalized. Another study suggested that the highest level of participation in hospital care was most likely to be found among chronically-ill patients, who perceive their status as somewhat permanent (Lidz, Meisel, & Munetz, 1985).

In summary, although patient satisfaction research tended to oversimplify the complexity of patient evaluation processes (Fitzpatrick, 1984; Locker & Dunt, 1978), it paved the way for separate estimations of patient expectations and evaluations of health care providers. Sociology, psychology, and nursing research verifies the link between patients' desires for cognitive and behavioral control, and later evaluations of health care personnel. Other influencing factors, such as the patient's educational level, numbers of past hospitalizations, and problem chronicity have had inconsistent effects on the expectation-evaluation relationship (Korsch et al., 1968; Lidz, Meisel, & Munetz, 1985), and more systematic investigation of these variables may be warranted.

The Relationship Between Desire for Control and Coping Strategies

Personal control is often categorized as a coping strategy which is used to decrease negative outcomes from stressful events (Solomon, Holmes, & McCaul, 1980).

Therefore, an individual's desire for control could determine ultimate use of certain coping strategies (Folkman, 1984). For example, lack of obtaining a desired level of control was found to result in the use of more problem-solving than emotion-control coping strategies (Solomon et al., 1980). In addition, the type of situation seems to be an important determinant of coping strategies when high control expectations are present in both major life events (Dohrenwend & Martin, 1979) and perceived stress levels of daily encounters (Jackson & Tessler, 1984).

In a study of a typical hospital situation, patients' control preference was linked to later perceptions of being able to cope with nasogastric tube insertion (Padilla et al., 1981). A single item response to desired control did not explain the variance related to actual perception of control during the procedure. Only those who did not initially desire control reported improved coping ability, which may have been influenced by the provision of coping suggestions in some of the educational sessions. However, when cognitive control information was combined with behavioral control techniques (suggested ways to cope), patients reported improved use of and perceptions of control.

The ability to cope (as indicated by increased comfort during a procedure) is not equivalent to diverse coping methods that may be used during complex interpersonal

interactions. In the proposed study, the use of coping strategies, in and of itself, is not equated to being good or bad, since most people tend to use a variety of coping methods (Folkman & Lazarus, 1985). Specific psychological outcomes, such as resultant distress and feelings about coping effectiveness need to be addressed. There have been numerous studies that have verified the relationship between patient desires for control and subsequent psychological outcomes, which will be discussed next.

Desire for Control and Resultant Psychological Distress

Research specific to patient control during health care procedures has often assumed that increased amounts of situational control are good, while decreased levels result in more stress. It was believed that preparatory information would enhance these feelings of control. In two studies, informational preparation for stressful endoscopy and surgical procedures, including explanations of sensation-related expectations, was found to be helpful in decreasing negative emotional responses to these events, but had equivocal effects on other recovery indices (Johnson & Leventhal, 1974; Johnson, Rice, Fuller, & Endress, 1978).

The "more is better" control assumption has been challenged. Although many patients tend to feel more satisfied if health care providers give information (Hall et al., 1988), others are more comfortable with allowing health care professionals to make the decisions. This has

been supported in early research which measured situational stress during hospitalization. It was determined that people who were comfortable with the authoritarian role of caregivers (i.e., low desire for control), had a more positive emotional reaction to hospitalization (DeWolfe, Barrell, & Cummings, 1966).

More recent research which focuses on uncertainty has indicated that ambiguity tends to exacerbate stress. Mishel (1984) used hospitalization stress (Hospital Stress Rating Scale) as a dependent measure, and found that increased levels of uncertainty (vagueness, lack of clarity and cognitive control) contributed to increased patient stress during hospitalization. The study's concept of uncertainty was primarily found to reflect ambiguity, and not the other unpredictability factor which relates to lack of the perception of control (Miller, 1979). Ambiguity, or the lack of clear, understandable information (and not just the lack of information altogether), may be an important factor which satisfies patients' desires for control and decreases resultant stress. Other research has revealed that caregivers need to emphasize patient understanding and learning needs, through reflection and other interpersonal communication techniques, instead of simply giving information or advice (Hills & Knowles, 1983).

Thus, there are inconsistent findings linking the desire for control to subsequent psychological distress. A person with a high desire for control seems more likely to

experience distress if information is unclear, and this may reflect health care professionals' lack of concern for adequate patient understanding (Alvino, 1986; Korsch et al., 1968; Mishel, 1984; Hills & Knowles, 1983). However, those with a low desire for control may or may not be able to cope, and this may result in psychological distress (Johnson & Leventhal, 1974; Johnson et al., 1978; Padilla et al., 1981). Other studies linked the desire for control to coping effectiveness.

Desire for Control and Coping Effectiveness

In a systematic study which assessed patients' desires for cognitive and behavioral control, it was determined that the "most powerful predictor of adjustment ... was the congruence between patient preference for information (cognitive control) and the specificity of the information received" (Auerbach et al., 1983, p. 1293).

Another study which stressed inpatient control needs found that patient role information is needed in order to adjust to hospitalization (Dennis, 1987). Expectations during interactions with health care professionals and the general hospital routine were two factors that helped patients to adjust and made their stay "more pleasant." These patient role concerns were highly correlated with responses to the Krantz Health Opinion Survey (KHOS), which measures both cognitive and behavior control needs in health care situations.

In summary, the desire for control tends to influence

patient evaluations of caregivers and other outcomes, such as coping strategies, psychological distress, and feelings about coping effectiveness (adjustment). Research has indicated that there may be different levels of desired control and that this expectation, in turn, will affect other variables in the model. Those with higher control needs tend to demand more of health care professionals, and become more distressed if these expectations are not met.

The proposed study will measure psychological outcomes, including individuals' self-appraisals following interactions with health care providers. It is important, therefore, to consider dispositional, day-to-day self-acceptance appraisals (self-esteem levels), and determine how these influence their interpretation of caring by others, psychological distress, and coping effectiveness. It has been suggested that the importance of self-esteem should not be underestimated; improved methods of understanding and evaluating it may help to improve the ambiance of health care institutions (Gilberts, 1983). Self-perceptions have been found to be useful when attempting to understand how an individual judges caring by others (Engel, 1980; Fey, 1955).

Self-Esteem, Perceptions of Humanistic Caring and Coping Effectiveness

Research has uncovered complex associations between self-esteem, its influence on subsequent interactions with others and ultimate reactions, such as the psychological

distress and coping effectiveness. This discussion will first address the links between three components of the proposed model (self-esteem, perceptions of others, and coping effectiveness) and then will present the research of relationships between self-esteem and psychological distress levels.

Prior to a discussion of the relationships between the first three variables, it is important to consider the theories used to explain findings, and the way in which the self-esteem level was used. Two theories were proposed to explain self-esteem research findings (Wylie, 1979). Both consider the ways individuals handle discrepant self-concept information from others. Some purport that individuals view situations in a "self-enhancing" manner; others suggest that each type of input (and person providing the information) is accepted if previous self-perceptions are maintained. These are called the self-enhancement and self-consistency theories (Wylie, 1974). These theories have described how basic self-esteem affects an individual's interpretation of interpersonal interactions, and post-interactional self-concepts. Thus, many of the early studies of self-esteem used the variable as both an antecedent and outcome measure. As an outcome, it referred to transitory self-concept perceptions, which may be unique to each situation.

In a review of 57 self-esteem studies, Wylie (1979) found that if the investigation used interpersonal

interactions with significant others as a "treatment," the self-consistency theory was usually evident when poor evaluations were given to low self-esteem individuals or good evaluations to those with high self-esteem. That is, if an expert rated the subjects favorably, it tended to enhance basic self-esteem levels, resulting in high posttest "functional" levels. If poor evaluations were given to low self-esteem individuals, there was little protest and the feedback was accepted. Other research has shown that self-enhancement prevails even if the evaluator gives unfavorable feedback to individuals with high self-esteem and, subsequently, the evaluator is often degraded by high self-esteem individuals who were negatively evaluated.

An example of research which indicates the existence of two opposite, co-existing self-images, and the way in which post-treatment affects evaluations of others as well as post self-concept levels was reported by Ludwig (1970). This quasi-experimental study of 190 ninth-grade boys (representing two schools) measured their feelings about their physical (athletic) ability. After determining insignificant differences on pretest self-perceptions about their physical ability, the students were randomly divided into three groups, a control group, and those subjected to either negative or positive evaluations. Following a three week period of regular gym activities, "specialists" (identified as experts to the group) gave the appropriate

predetermined evaluation, depending on whether the individual was preassigned to a treatment or control group.

Results indicated that those receiving unfavorable evaluations were found to have significant, temporary changes in their self-concept. The negative feedback also affected student ratings of the evaluator. High self-esteem students who were given negative feedback gave the evaluator poor ratings. However, in general, both high and low self-esteem individuals indicated favorable evaluator ratings if the student was positively evaluated. Thus, this study considered the effect of the evaluator's importance (introduced as an "expert") on subsequent student ratings of the instructor, as well as the impact of unfavorable student evaluations on their own self-concept ratings (considering pretest levels of self-esteem). The perceived expertness of the evaluator was an important factor to consider when analyzing each of the group's post-treatment self-concept ratings (measured by self-ratings of physical ability). Thus, both the perceived importance (cognitive appraisal) of the person giving implicit, non-caring or explicit feedback and the individual's personality-based self-esteem level influence various types of situational self-concept ratings.

Many similar experimental studies attempting to alter subjects' self-concept were reported in the 1960's and early 1970's. However, since that time, ethical concerns

have prohibited the potentially harmful treatments associated with devaluing an individual's self-perceptions. These studies confirmed self-esteem's influence as an antecedent and outcome variable. As an antecedent, self-esteem was found to have a considerable impact on an individual's interpretations of others; as an outcome variable, it indicated the potent, albeit temporary, effects that certain situations may have on an individual's self-concept.

Self-esteem as an antecedent variable. Communication research using observation of caring, confirming behaviors included foundational self-esteem levels as an antecedent variable (Hull, 1982, Murphy, 1980). As such, it determined the extent to which self-esteem could influence perceptions of humanistic caring by others. One study found that individuals with high self-esteem levels tend to perceive greater amounts of caring than those with low self-esteem, even from interactions that had similar behavioral ratings (Hull, 1982). These findings reflect the self-enhancement theory. However, the six-item Perceived Confirmation Inventory (PCI) which was used to measure perceptions of confirmation in this study (awareness, interest, acceptance, respect, liking, and trust) has only one reported psychometric property: a test-retest correlation coefficient of .70 (E. Sieburg, personal communication, October 20, 1988). Instrument validity is also a major concern, since the items are very

general, lack a theoretical framework, and purport to measure others' respect and concern following an interpersonal encounter.

Another study, which used self-esteem as an antecedent and outcome variable, found no difference between pre- and post-levels following health care provider interaction (Murphy, 1980). However, chronically-ill patients are known to have decreased self-esteem levels over time (Antonucci & Jackson, 1983), and this may have been deterred by health care provider humanistic caring. In addition, this study's treatment effect (provider caring behaviors) was not implemented in a measureable, replicative fashion, and other concerns relating to the use of the PCI also limit this study's generalizability.

Even with these drawbacks, these studies indicated that self-esteem tends to influence an individual's perception of others. In the case of health care, providers are still characterized as being disrespectful to patients and many interactions are less than therapeutic (Flaskerud, Halloran, Janke, Lund, & Zetterlund, 1979; Hills & Knowles, 1983). Negative, unconcerned attitudes of hospital staff have also been identified by studies of hospital stress (Volicer, 1973, 1974). Therefore, it is also important to consider the outcomes of negative interactions on an individual's self-concept (e.g., judgments concerning coping effectiveness) while hospitalized.

Coping effectiveness as an outcome variable:

Judgments about self-concept perceptions. Many of the studies using self-concept as an outcome variable examine the relationship of the appraisals of others on an individual's evaluation of their ability to effectively cope. Other people, particularly health care professionals, may have a great effect on patients' self-perceptions (and, ultimately, levels of coping effectiveness), since those who are hospitalized are generally dealing with physical illness in a strange environment, and they may be vulnerable to negative self-evaluation input (e.g., lack of humanistic caring). A study examining interpersonal communication determined that people experiencing an interaction which denied their self-worth tended to be less satisfied than those exposed to confirming, accepting communication (Jacobs, 1973).

Another exploratory study using open-ended interview questions with 35 hospitalized patients indicated that noncaring interactions with health care providers made them feel "stupid" or like they were "asking more than (they) should," a "nobody," or that they were "out of place and out of line" (Drew, 1986, p. 41). These findings tend to confirm the threat to self-esteem (and broader self-concept) model and not other limited theories dealing with self-esteem, such as the enhancement or consistency theories (Fisher and Nadler, 1982). These authors posit that recipient reactions to aid are integrally related to

self-related consequences, in this case, the individual's ability to cope. If humanistic caring by nurses is equated with confirmation (positive concern, respect, etc.) (Engel, 1980), then research supports using coping effectiveness as an outcome variable.

In summary, preexisting self-esteem levels have been found to influence humanistic caring perceptions of others. As an outcome measure, coping effectiveness reflects how an individual copes with caring or noncaring interactions. In the proposed study, coping effectiveness refers to self-reported psychological, physical, and social indices of the self-concept. Self-esteem has also been shown to effect individuals' levels of psychological distress.

Self-Esteem and Psychological Distress

Levels of self-esteem have been shown to be inversely related to depression (Rosenberg, 1965). Thus, the patient's dispositional, foundational self-esteem level may help to interpret later feelings of psychological distress (including depression and anger) (Derogatis, 1977). Previous studies investigating this relationship used personality measures (e.g., Cattrell's Personality Inventory, CPI) as indicators of the individual's usual disposition, and correlated these responses with interview findings while patients were hospitalized. The CPI's trait of "emotionality" was found to correlate with later feelings of anxiety and depression (Wilson-Barnett, 1976).

However, the post-interview method used to evaluate psychological distress may have created experimenter effects, thereby contaminating the patients' self-reports.

In another study, Lucente and Fleck (1972) found significant relationships between a personality measure (Taylor Manifest Anxiety Scale) and anxiety levels of 400 medically- and surgically-treated patients. However, the dependent measure consisted of modified Taylor Manifest Anxiety Scale items, suggesting possible multicollinearity. Other studies also had difficulty with finding measures of situationally determined psychological distress when attempting to find relationships with personality (trait) measures (DeWolfe et al., 1966). Affective personality measures may be helpful when attempting to discern trait versus state influences on psychological outcomes.

A more recent study focused on the psychological distress experienced by 150 middle-aged community residents, who coped with daily concerns (called hassles) over a period of six weeks (Folkman & Lazarus, 1980). This study revealed that basic levels of self-esteem (highly correlated with "mastery," a personality variable) and trust in others explained 18% of the variance in psychological distress symptomatology. These variables, when combined with cognitive threat appraisal and coping strategies, accounted for approximately 44% of the variance in psychological symptoms.

The relationship between self-esteem and psychological

distress must be viewed with caution due to the lack of recent research with the hospital population and internal validity concerns related to experimenter expectations and multicollinearity effects. The self-esteem and psychological distress relationship was strengthened when self-esteem was combined with other variables (cognitive appraisal and coping strategies), and these three factors accounted for a significant amount of the psychological distress variance. It is concluded that there may be both a direct and indirect relationship between self-esteem and psychological distress.

Relationships between other variables in the model, particularly humanistic caring, mediating processes and psychological and coping effectiveness outcomes, will be discussed next. The first part of the discussion will present the potential for threat in patient interpretations of caring and noncaring provider interactions, and relate these cognitive appraisals to patients' use of coping strategies.

Humanistic Caring and Mediating Processes

Cognitive appraisal of threat in health care provider-patient relationships. Interviews with hospitalized patients have revealed that negative staff behavior is a major component of hospital-related distress (Wilson-Barnett, 1976). This negative behavior has been reported as the tendency for nurses to emotionally distance themselves from or avoid direct patient care contact

(Flaskerud et al., 1979). A recent study of patient empathy ratings of a limited number of psychiatric nurse specialists (five) found that two of the five had low empathy ratings (using the Barnett-Lennard Relationship Rating Scale) (Hardin & Halaris, 1983). Other studies indicate ineffective professional relationships, such as the tendency for nurses to give advice or information, instead of using reflection or other, more appropriate communication techniques (Hills & Knowles, 1983).

A study of hospitalized patients' humanistic caring perceptions found that nurses' interpersonal impact was generally interpreted as being friendly and non-hostile (Latham, 1988). In addition to this cognitive appraisal of the nurses' interpersonal impact, these 218 hospitalized patients' ratings (on a 1-4 scale), indicated that humanistic caring by nurses was evident, particularly during physical (mean scores ranged from 2.7-3.2) and emotional assistance (mean scores ranged from 2.4-3.1). However, it was less evident with patients' spiritual (mean scores ranged from 2.1-2.7) and social needs, such as nurse interaction with significant others or concern for the patients' outside worries (scores ranged from 2.1-2.9) (S.D.s for all four areas averaged .64). Nurses' interaction with the patient's family (and significant others) is an important component of humanistic caring, since fulfilling family needs for information and other assistance often facilitates their support of the patient

and subsequent coping strategies (Hickey & Lewandowski, 1988; Holahan & Moos, 1985). Other studies which describe caring by nurses found that patients may prefer one type of caring over another.

For example, Larson (1981) used a literature review and delphi study of expert nurses to determine 50 nurse caring behaviors used with oncology patients. After giving this list to a sample of oncology nurses and patients, the results indicated that patient and nurse caring preferences differed (Larson, 1984, p. 50; 1986). Using the Q-sort technique, nurses were found to favor psychosocially-oriented behaviors, while patients preferred task-oriented behaviors. A test-retest with 82 registered nurses indicated that 79% consistently listed the same five behaviors as most important and 63% rated another set of five behaviors as least important. Post-study respondent comments to the investigator indicated that these caring ratings may have been influenced by social desirability.

A replication of this study with another oncology patient sample reported similar results (Mayer, 1986). However, the physical care modalities may hold greater symbolic significance for these patients, as determined by more recent analyses of patient ratings of the instrumental (task-oriented) and expressive (psychosocial) behaviors of health care professionals (Hall et al., 1988). This meta-analysis of 41 qualitative studies (that utilized audio and/or video tape recordings of provider-recipient

health care interactions) determined that patient satisfaction (and therefore decreased feelings of vulnerability) were most significantly related to the interpersonal competency of the caregiver (combined $Z = 6.80$; average reported $r = .33$). Provider information-giving was generally rated as the second most important caregiver behavior in these studies.

As a result of analyzing this research, the authors hypothesized that task behavior of the caregiver (e.g., information-giving, technical competence, and the use of pertinent questions to obtain the recipient's perception) symbolize a caring attitude in that the provider shows concern for the patient in performing these tasks. On the other hand, provider socioemotional behavior (represented by social conversation, positive talk, and interpersonal competence) was also found to influence patient satisfaction. Patient perceptions of adequate caregiver task behavior seemed to influence patient ratings of the providers' socioemotional competence; however, the opposite reciprocal effect was not evident. It may be more important to relate the various types of caring and noncaring behaviors to patient outcomes instead of rating the importance of each specific behavior. This approach was reported in other studies.

For example, altering the expressive components of health care provider interactions with patients was found to affect recipients' interpersonal impressions of

professionals (Auerbach et al., 1983). If staff delivered information in an unconcerned manner, they were later rated as being dominant, hostile, and unfriendly, which later affected patient adaptation. However, opposite ratings were given if information was delivered in a personal manner (with indicators of both verbal and nonverbal concern). This study underscored the importance of using sound interpersonal techniques which exemplify a caring attitude, since these could later influence the patient's ability to cope and successfully adapt to hospitalization.

Patients' use of mediating processes following humanistic caring by health care providers. Outcomes of adverse interpersonal interactions with health care personnel may be interpreted as negative regard for the patient if inadequate coping strategies are used (Drew, 1986). This research used a constant comparative method to analyze audio-taped interviews of 35 obstetrical, gynecological, and surgically-treated hospitalized patients' impressions of providers. If these interactions were perceived to be threatening (primary appraisal), some patients sought support from family or friends, became angry, overlooked the interaction, or withdrew from further discourse, while others, who weren't able to use effective coping methods (secondary appraisal), felt fear, anger, or shame. Adverse reactions were reported by patients if the situation was perceived as threatening (primary cognitive appraisal), coping options were unavailable (secondary

appraisal), or coping strategies were ineffective. Caring interactions did not necessitate coping, and patients indicated subsequent positive feelings and more energy to deal with situational demands.

Another phenomenologic study described these same negative feelings and patient use of various coping methods following a perceived lack of humanistic caring by nurses (Anderson, 1981). Patients stated that they became assertive, withdrew, cried, or simply didn't respond. Those who did nothing or withdrew tended to have adverse psychological reactions similar to the Drew (1986) results.

These studies indicate that health care practitioners need to be more aware of patient interpretation of, and emotional self-management following, provider-recipient interactions. This research also explicates the process used by patients to judge health care providers' caring and non-caring behaviors, and the methods they used to cope with the lack of humanistic caring. Other studies defined psychological outcomes resulting from negative interactions with others, and lend further support to this relationship.

Humanistic Caring and Psychological Outcomes: Distress and Coping Effectiveness

Several studies linked the lack of humanistic caring to psychological distress and impaired coping effectiveness. For example, hospitalized patient descriptions of noncaring encounters with staff indicated adverse psychological distress and ineffective coping

(impaired self-concept), such as the lack of important human attributes (Drew, 1986). Other descriptive research has also delineated the relationship between humanistic caring and these self-reported outcomes. A phenomenologic study of ten community residents summarized patient reactions to previous interactions with nurses as the nurse's presence, and the patient's response and consequences (Rieman, 1986). Patients reported feelings of being relaxed and secure if they felt cared for, or frustrated, scared, depressed, angry, afraid, or upset when they perceived a non-caring interaction. General statements of the importance of various behaviors were found to vary between men and women.

Additional support for this relationship was provided by an analysis of a limited number of patient satisfaction studies of nurses. This analysis revealed that these health care providers ask more questions and "provide more overall communication" when compared with physicians (Hall et al., 1988, p. 667). Furthermore, in a phenomenologic study of hospitalized patients, it was suggested that nurses are concerned about the human side of technological interventions (Anderson, 1981), which includes patients' psychological reactions. Patients described negative reactions if humanistic caring did not occur, such as "helplessness, self-consciousness, anger, feeling out of place and insignificant" (p. 72). Since it is believed that nurses often have access to both the mind and body of

the ill person requesting health care (Kimball, 1981), they are in an opportune position to assist the patient to deal with the increased bodily awareness and the resultant perceived barriers to realizing a normal sense of selfhood when physically ill (Gadow, 1980). In this way, nurses can provide physical care and implement technological interventions in an empathic, caring manner to help patients refocus on mind-body continuity and learn what is needed to overcome or deal with their illness.

In a study of patient impressions of preoperative interactions, postoperative adjustment was inversely related to the degree of dominant and hostile provider perceptions (Auerbach et al., 1983). The investigators concluded that humanistic caring influences patient adjustment and effective coping following serious health care situations. This reinforces previous descriptions of hospital stress, since feelings of displacement, isolation, knowledge and skill dependency, and potential loss of freedom and control are unique to this experience (Pellegrino, 1985, p.18).

From a hospitalized patient's viewpoint, caring which averts these negative feelings was described by 80 interviewed patients as including "what the nurse does and what the nurse is like" (Brown, 1981, p. 118). The first category referred to nurse surveillance, professional competence, information-giving, and assistance with pain. The second included time spent with the patient, reassuring

presence, individualization of care, and promotion of autonomy. An earlier analysis of open-ended interviews with 50 home health care patients supported these findings (Henry, 1975, p. 49).

Communication research dealing with confirming and disconfirming experiences supports the proposition that inattentive, nonsupportive, or rejecting interactions (i.e., disconfirmation) tend to alter the affective portion of the individual's self-concept (Dance & Larson, 1976, p. 79). On the other hand, research dealing with "recognition, acknowledgement, and endorsement" behaviors during interpersonal interactions has indicated its positive, confirming effect on the recipient (Cissna, 1987; Laing, 1961, p.82; Sieburg, 1985). This research used external observers' scoring of behavioral and conversational content in a rating scale originally developed by Sieburg (1969), and later modified by Garvin and Kennedy (1986). Confirmation contributes to a validation of the other person's self-image, which leads to positive emotional consequences (Waizlawick, Beavin, & Jackson, 1967).

One study used self-reports of feeling cared for by health care professionals (using the Perceived Confirmation Inventory) without concurrent observation of confirming behaviors. Thirteen outpatients, who regularly attended a health clinic with diagnoses of rheumatoid arthritis, reported post-interaction self-esteem levels (Murphy, 1980). Higher functional self-esteem levels were predicted

to result from patient perceptions of increased caring from health care professionals (two female nurse practitioners and one male physician). Although the results indicated that high levels of caring did not increase self-esteem scores, it should be noted that the procedure for increasing health care provider caring behaviors included the review of a previously-established "confirmation atmosphere" protocol, which was used by these professionals as a reference to "exaggerate" their already confirming behaviors with patients (pp. 29-30). This finding, along with the use of the PCI, an instrument of unknown sensitivity and validity, does not generate confidence in the findings.

If an individual's usual level of self-esteem is contrasted with feelings (psychological distress and coping effectiveness) following important life events (e.g., hospitalization), the effect of the experience may be better evaluated. This is an especially important consideration in the light of patients' feelings of vulnerability while hospitalized, and continued reports of non-caring interactions with health care personnel (Blundell, 1987; Rorabeck, 1987). Studies have indicated that these interactions result in negative cognitive appraisals, use of coping strategies, psychological distress and lack of effective coping.

The remaining discussion will include the relationships between the two mediating processes and the

link between coping strategies and the two psychological outcomes.

Cognitive Appraisal and Coping Strategies

Vulnerability has been previously conceptualized by Lazarus (1980) as a conscious form of thought which influences coping attempts, termed "primary cognitive appraisal" (p. 287), which is an individual's assessment of the degree of threat. This patient interpretation (e.g., feelings of threat from negative interactions with resultant vulnerability) is important to consider since, if nurses' behavior is not considered to be important to the patient's outcome, it may not be threatening.

Research supports the relationship between threat (i.e., vulnerability), coping, and psychological distress. A study of physically healthy, community-dwelling residents determined that cognitive appraisal of the threat of the stressor may lead to specific coping strategies (both emotional and problem-solving methods), which then indirectly influenced self-reported psychological outcomes. However, typical stressors did not include illness, since only six percent ($n = 45$) of the 750 reported incidents were directly related to poor health in this study (Folkman et al., 1986). Other studies of healthy samples also verify this relationship.

A study of 108 students enrolled in an undergraduate psychology course considered the changes in mediating processes and psychological outcomes during the midterm

examination process (Folkman & Lazarus, 1985). Data was collected before and immediately following the exam, and after grades were distributed to the students. A large amount of the variance of the self-reported psychological status of these students was accounted for by cognitive appraisals of the exam and use of coping strategies.

Measurement of transient coping methods seem best suited to a study of hospital stress, since individuals tend to employ different methods, depending upon the type and context of the stressful event and the individual's perception of the situation (Folkman & Lazarus, 1980; Panzarine, 1985; Shaver & Drown, 1986). However, it cannot be denied that personality traits influence appraisal of the situation, and eventual choice of a coping strategy (Holahan & Moos, 1985; 1986).

In the case of hospital-related stressors, these situational appraisals have included patients' perceptions of negative interpersonal interactions with health care providers (Drew, 1986; Riemen, 1986; Wilson-Barnett, 1976). Strategies used to deal with this stressor depend on the threat to some aspect of the individual's life or well-being e.g., transient self-concept (primary appraisal) and/or the individual's perception of their ability to alter the situation. The situation's changeability has been associated with problem-focused coping strategies, while threatening situations that are not able to be altered are often accompanied by attempts to control

emotions (Folkman et al., 1986).

The specific type of coping strategies used by hospitalized patients to avert psychological distress following interactions with health care providers are an important consideration in the proposed model. To date, patient research in this area has been limited. For example, cognitive appraisals, including patient approximation of harm, threat, and controllability, have been studied in relation to illness (Browne et al., 1988) and other interpersonal perceptions which influence objectively-rated patient adaptation following surgery (Auerbach et al., 1983). The final two relationships of the proposed model include the link between coping strategies, psychological distress, and coping effectiveness.

Coping Strategies and Psychological Outcomes

Psychological outcomes, such as anger, anxiety, depression, and increased sensitivity, have been used as outcome variables in many studies, and have been discussed previously in relation to hospital stress (Lucente & Fleck, 1972; Wilson-Barnett & Carrigy, 1978). More recent research has linked coping strategies and psychological distress.

A study using a physically healthy sample concluded that most college students' (96%) used a wide variety of coping strategies to deal with a midterm exam (Folkman & Lazarus, 1985). This study implicated the utilization of

multiple types of coping methods to manage psychological distress in physically healthy samples. Reactions of those with a physiological illness were evaluated in a later study.

A study of coping strategies used by hospitalized burn-injured patients determined that patients using problem-focused coping methods tended to adjust better to burn-related injury (Roberts, Browne, Streiner, Byrne, Brown, & Love, 1987). When these methods were combined with avoidance techniques, the two together explained only 19% of the reported psychological distress. However, the coping measure used in this study had questionable reliability, since internal consistency coefficients (Cronbach) ranged from .35 to .62 with the patient sample.

Minimal conclusions can be made from the limited research which links hospitalized patients' coping strategies with psychological distress and other adaptational outcomes. As suggested by larger studies, people tend to use multiple coping methods when dealing with interpersonal stressors (Folkman et al., 1986), and these coping methods and other cognitive appraisals help to determine resultant psychological distress levels and the degree of coping effectiveness.

Coping Strategies and Coping Effectiveness

Physiological and psychosocial adaptation were found to be two independent domains in a study of 60 chronically ill adults with diabetes mellitus, essential hypertension,

and rheumatoid arthritis (Pollock, 1986). Other researchers have operationalized coping effectiveness as a multidimensional concept. A valid, reliable measure of the multidimensional components of coping effectiveness was recently developed and used with physically ill patients. This link has limited empirical support at this time.

Help-seeking from others is often envisioned as a component of coping strategies (Schaefer, Coyne, & Lazarus, 1981) and has been shown to influence coping effectiveness. In a study of 50 wheelchair-bound subjects, the availability of interpersonal support was important to both emotional- and problem-focused coping strategies and ultimate feelings about coping effectiveness (McNett, 1987). These coping strategies mediated the effect of the availability of interpersonal support in the reformulated path analytic model. These variables, when combined with other coping strategies, cognitive appraisal of threat, and perceived effectiveness of interpersonal support, accounted for a significant amount (61%) of the variance of coping effectiveness.

Age as a Potential Influencing Factor

Age may be a relevant factor to consider when attempting to interpret patient responses to questionnaire items. Younger patients were found to place more value on nursing behaviors indicative of caring when they were asked to discuss or rate them (Brown, 1981). This indicates that patients may evaluate caregivers differently, depending on

their age. The suggestion of this cohort difference was also suggested in a qualitative study by Shiloh (1972) who requested information about health care providers from pictures of provider-patient interactions. Volicer and Burns (1977) also determined that older patients (over 55.9 years of age) usually had less stress and an easier adjustment to hospitalization. However, there are no clear indications of exact ages which altered these outcomes. Different coping strategies may be used by older groups (Putnam, 1987; Quayhagen & Quayhagen, 1982). In addition, self-esteem and other aspects of the self-concept are less changeable with older age, particularly after adolescence (Hamacheck, 1978; Marsh et al., 1984). Therefore, the effect of age on all respondents' ratings, but particularly self-esteem, humanistic caring perceptions, and coping strategies and effectiveness variables, will be considered as part of the second research question of the proposed study.

Summary of the Literature Review

In summary, there are a number of studies attempting to delineate patients' impressions of caregivers and consequences of potentially negative recipient-provider interactions. Appendix A lists studies that support key relationships in the proposed model. Humanistic caring has previously not been measured as a key variable, and it will replace interpersonal impacts, satisfaction, and confirmation concepts used in previous research. In

addition, relatively new variables found to mediate the stress-outcome relationship, such as cognitive appraisal and coping strategies, are included in the proposed model. Two relationships, specifically cognitive appraisal and coping strategies, and coping strategies and effectiveness outcomes, need additional support with an unhealthy, hospitalized population. Self-esteem also has limited support with this population but is theoretically supported by previous self-esteem measurement (Wyllie, 1979) and the influence of self and other acceptance research (Hull, 1982).

Although nurse-patient encounters are often depicted as non-caring and non-therapeutic, research has not addressed the process used to deal with this type of interpersonal stressor. This study will consider previously identified factors shown to influence patient interpretation of health care professionals, as well as the process used to deal with these interactions (mediating variables) and ultimate psychological and adaptational consequences. These outcome variables will be studied from a hospitalized patient's perspective, emphasizing self-reported levels of psychological distress and coping effectiveness. The next chapter will describe the methodology, data analysis techniques, and internal and external validity concerns of the proposed study.

Chapter Three

Method

Design

This correlational study used a path analytic method to investigate the variables which contribute to or alleviate undesirable psychological and coping outcomes relating to interactions with nurses. The path analytic model and accompanying measures discussed in this chapter are depicted in Figure 3.

The causal antecedents in this model are the variables in the first and second time-orderings. The first set of exogenous variables include the person's desire for control and dispositional level of self-esteem. Humanistic caring, in the second time-ordering, is the first endogenous variable. The next set of endogenous variables in the third time ordering include cognitive appraisal and coping strategies. Finally, immediate effects, in the fourth time-ordering, relate to psychological outcomes and coping effectiveness.

Structural Equations

The structural equations for this over-identified, recursive causal model are as follows (Asher, 1983):

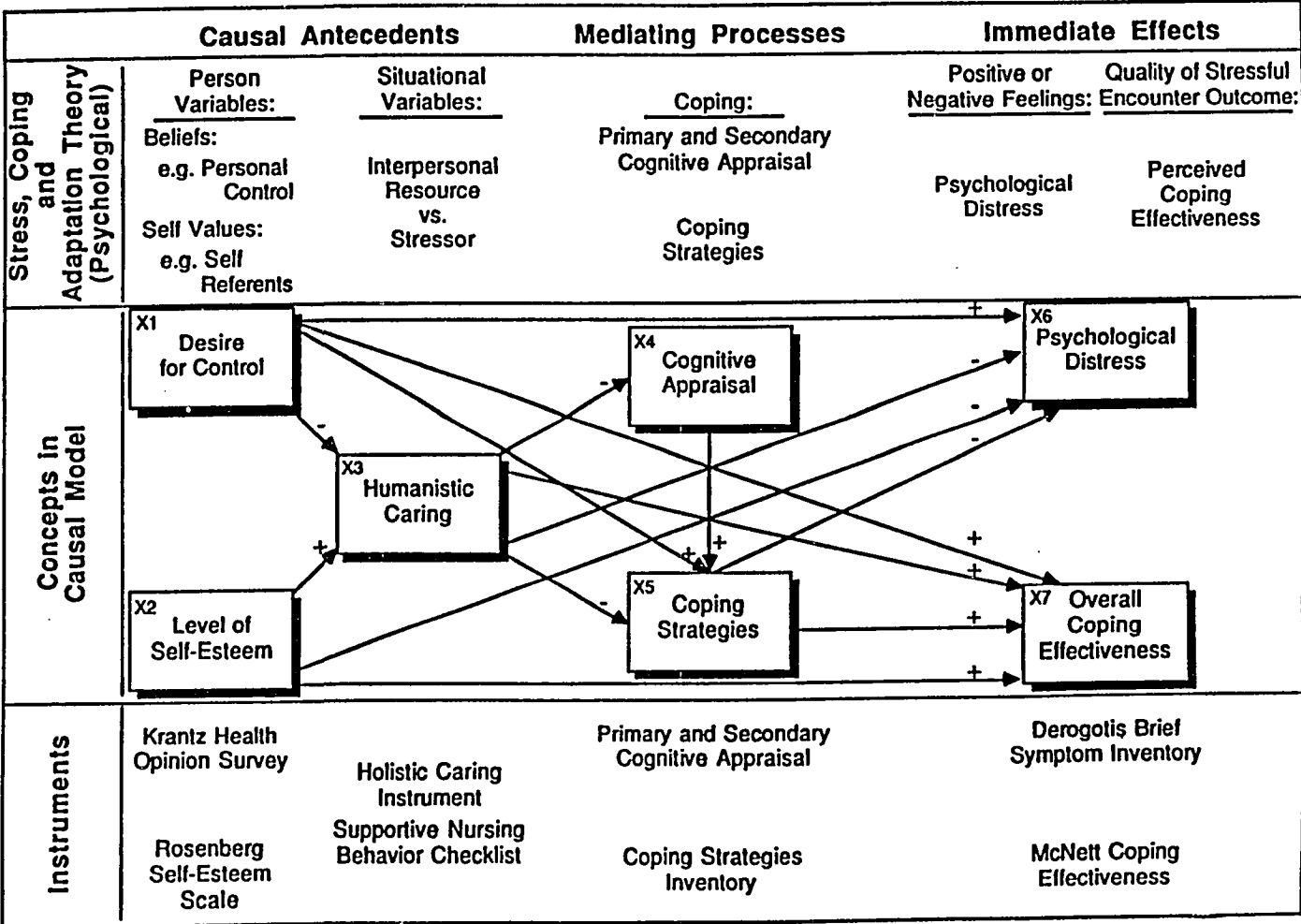


Figure 3. Comparison of Theory, the Proposed Humanistic Caring Model, and Operational Measures

$$\begin{array}{ll}
 X_1 = e_1 & X_5 = P_{51} X_1 + P_{53} X_3 + P_{54} X_4 + e_5 \\
 X_2 = e_2 & X_6 = P_{61} X_1 + P_{62} X_2 + P_{63} X_3 + P_{65} X_5 + e_6 \\
 X_3 = P_{31} X_1 + P_{32} X_2 + e_3 & X_7 = P_{71} X_1 + P_{72} X_2 + P_{73} X_3 + \\
 X_4 = P_{43} X_3 + e_4 & P_{75} X_5 + e_7
 \end{array}$$

Subjects

Subjects for the study were recruited from two large, metropolitan, teaching hospitals in the Los Angeles area of Southern California. The majority of the respondents (88%) were hospitalized at Memorial Medical Center of Long Beach, and the remaining 12% were from the University of California, Irvine Medical Center. The census of the first center dropped dramatically during early data collection and remained low. This resulted in more hospital-based nurses but similar staffing ratios to the previous period of increased census. Other than the census changes at one institution, these two major medical centers are very similar. Both have the same medical instruction program and the level of acuity, type of patients, and nursing staffing patterns are comparable.

Six adult units, with a population of medically-treated patients were chosen for participant recruitment at the first facility. Two similar units were designated at the second hospital facility. A total of 120 hospitalized, medically-treated male (57%) and female (43%) patients were included in the study following their second

day of hospitalization (Prescott, 1987). The mean length of stay was 4.6 days (s.d. = 2.7), with the majority (73%) reporting a stay of less than six days. Patients hospitalized over two weeks were not included due to previously-reported changes in expectations (Nelson-Werwich, Curray, Taylor, Woodbury, & Cantor, 1981). The 25-65 year-old age range was part of the inclusion criteria, and subjects in this study represented this entire age span, with a mean of 47.8 years. The median age of 48 years allowed comparison of the younger and older participants' reactions to hospitalization since age has previously been reported to influence caregiver ratings, coping strategies, and stress levels (Quayhagen & Quayhagen, 1988; Volicer & Burns, 1977).

Screening criteria included English-speaking and reading ability, at least a 12th grade education, and no more than two previous hospitalizations during the preceding year. Almost half (43%) of the sample indicated completion of high school, while an additional 27% had a community college education. Twenty percent had a university education, and another 10% had attended and/or completed post-baccalaureate studies. Although four correlations between education and other variables had acceptable probability levels ($p < .05$), the number of years of education was minimally associated with these variables, which included the desire for control over health care ($r = .22$), self-esteem ($r = -.25$), HCI ratings ($r = .16$),

and secondary appraisal ($r = .15$). The relatively high educational level was deemed necessary due to the reading level (ninth to tenth grade) of the questionnaires. In addition, occupations of the respondents corresponded to these education levels. Some participants indicated professional careers (10%); most indicated semi-professional jobs (60%), which include clerical, sales, service, and protective occupations. Eighteen percent indicated an unskilled labor job (e.g., assembly work), while 22% were disabled and currently unemployed.

The type and degree of patient illness was reflected in the type of disease, acuity levels assigned by nurses, pain, mental alertness, and length of time taken to complete the questionnaire. The pathological entities of this sample included primarily cardiac-related disorders (32%), and equally-divided numbers of patients (totaling 44%) reported respiratory, gastrointestinal, and oncology diagnoses or pregnancy complications. Few participants (24%) suffered from neurological, immunologic, infectious, renal or endocrine disorders. It is interesting to note that most respondents (85%) had low acuity scores, which is an indication of the amount of hospital-based nursing surveillance or care that was required as a result of their illness.

This low level of acuity was also reflected in the pain and alertness scores of the group. Almost two-thirds

of the sample ($n = 77$, 65%) denied pain or discomfort, with only 16 respondents (13%) reporting more than moderate pain. The remainder of the participants ($n = 27$, 22%) indicated less than moderate pain levels. The mental alertness of the group was confirmed by high scores on the Mental Status Exam (nine to ten). This met selection criteria since an alert state was necessary to complete the lengthy questionnaire packet. On the average, it took respondents 45 minutes to complete the packet, however, due to the numerous interruptions (visitors, tests, other routine or necessary care), most respondents kept the packets overnight.

Other characteristics of the sample relate to ethnicity, spirituality, marriage and family. The sample was predominantly Caucasian (71%), with other ethnic groups accounting for a minority, such as Blacks (17%), and Asians and Hispanics (12%). Over two-thirds of the group (70%) reported being moderately or very religious or spiritual. Most of the group were married, half of these couples reported being married up to 10.5 years, and a majority (64%) reported having up to four children. Most of the remaining (26%) reported no children; however, this included those who were single or divorced.

Assessment Measures

Following a description of the measures, including the psychometric properties, the administration procedure will be discussed. The measures will be discussed in the order

of the hypothesized path analytic model, as diagrammed in Figure 3. A copy of each measure is included in Appendix B.

Desire for control. The desire for control was measured by the Krantz Health Opinion Survey (KHOS) (Krantz et al., 1980). This instrument measures the desire for control of health care processes, which is believed to be apparent in people's past behavior with health care services and their current need for health-related information. The behavioral (nine items) and informational or cognitive (seven items) control subscales have been used with respondents undergoing routine health care. The items have an agree (1) disagree (2) format, and after recoding, the scores are summed: High scores represent a favorable attitude toward self-directed and informed care. This suggests that patients wish to participate in their own health care.

Predictive, discriminant and convergent validity was established with three samples of college students. T-tests indicated that the self-help group scored higher on the behavior subscale (2.38; $p < .05$) than the frequent clinic users who were more dependent on medical care for similar conditions (1.98; $p < .05$). Both groups scored similarly on the cognitive (information) subscale (Krantz et al., 1980). Smith, Wallston, Wallston, Forsberg, and King (1984) reported discriminant validity for the information subscale with three different groups of

subjects, and convergent validity with another general measure of the desire for control, the Burger and Cooper (cited in Smith et al., 1984) Desirability of Control Scale.

The "middle-level" specificity of items measuring past information-seeking behavior in the KHOS information subscale were found to measure the "desire for control or a style of behavior" (pp. 424-435). In addition, the Kuder-Richardson was .77, with seven-week, test-retest reliabilities correlated at .74 (total score), .71 (behavior subscale) and .59 (information subscale). The instrument has also been used with hospitalized patients, and the information subscale highly correlated with the patient role decision factor (Dennis, 1987). This instrument relates to the patient's previously established desire for control in health care, and will serve as a typical disposition of patients which, in part, helps to guide expectations.

Self-esteem level. The Self-Esteem Scale is a 10-item, four-point, unidimensional measure of the way persons feel about their self-concept. Responses range from strongly disagree (4) to strongly agree (1). After recoding the answers, the instrument is scored as a summated four-point scale, with potential totals ranging from 10-40 (Ward, cited in Mangen & Peterson, 1982). The instrument was originally tested with over 5,000 randomly selected high school juniors and seniors and has since been

used in a wide variety of samples (Rosenberg, 1965). Since that time, high two-week test-retest correlation coefficients (.85), and internal consistency (Cronbach) (.74) have been reported (Ward, cited in Mangen & Peterson, 1982).

Convergent validity has been reported with self-stability and criticism sensitivity instruments, and scale correlations ranged from .59-.83, (e.g., .59 with Coopersmith's Self-Esteem Inventory) (Rosenberg, 1965; Silber & Tippet, 1965). The measure is based on a theoretical framework provided by the author's considerable work with self-esteem development in adolescent children (Rosenberg, 1965). Ward, (cited in Mangen and Peterson, 1982) indicates that this scale has been used extensively with adults and recommends it as a global self-esteem measure.

Perceptions of humanistic caring. The Holistic Caring Instrument (HCI) is a unidimensional, 40-item, four-point, summated, likert scale which determines if an individual is treated in a holistic manner (Latham, 1988). Each item is rated on a scale of strongly disagree (1) to strongly agree (4). There are two negatively-stated items to check response set. The scoring procedure is based on the ratings (one to four), with reverse scoring for negatively stated items (item #11 and item #40). An individual's total score related to preferences for being cared for in a holistic sense are determined by dividing the individual's

total raw score by the number of items. This results in a total score ranging from one to four, with a score between one and two indicating that an individual does not feel cared for in a holistic sense; two to three means that caring is evident; while a total score over three means that caring was very evident.

Items were constructed from a small qualitative study of 20 doctoral students and an extensive literature review. Validity of the tool was estimated by four methods. Two content specialists established a content validity index of 1.00, using a minimal item mean of 3.0 (quite relevant ratings). A pilot study of 30 patients confirmed item clarity, and the reading comprehension level was estimated at the sixth to seventh grade level by using the Fry Readability Formula (Fry, 1968). In addition, discriminant validity was established by simultaneous administration of the Impact Message Inventory (IMI) (Kiesler, 1987) to 218 hospitalized, medically- and surgically-treated patients. The IMI measures the interpersonal impact of others. Low correlations of .20 ($p < .01$) were found with the IMI hostile subscale, and .16 ($p < .05$) with its submissive subscale. The total HCI and IMI score correlation was .15 ($p < .05$), lending further evidence of discriminant validity between the two instruments. Convergent validity was evident from the mean inter-item correlation of .34, and the corrected item-total correlations (ranged from .41 to .71). In addition, the standardized Cronbach alpha

coefficient of .95 indicated a reliable scale. Finally, total score correlations with the 10-item version of the Marlow-Crowne Desirability Scale ($-.14$; $p < .05$), indicated that respondents did not answer in a socially-desirable manner (Crowne & Marlowe, 1964).

Measurement of other humanistic caring behaviors. The HCI will be combined with the Supportive Nursing Behavior Checklist (SNBC). The SNBC is a 36-item scale which reflects patient perceptions of professional caring support (Gardner & Wheeler, 1987). The items have two responses, each rated on a seven-point likert scale. The first answer is an evaluation of the importance of the activity, and the second response indicates how frequently that type of support was encountered during the current hospitalization. The final score represents the summed mean of each of the two answers, and ranges from one to seven.

The items of the SNBC were developed from a critical review of the literature (Gardner & Wheeler, 1979), and seem to reflect several dimensions of the humanistic caring model devised by Howard (1975). The HCI measures the holistic component of caring, while the SNBC subscales correspond to Howard's (1975) descriptions of the recipient's inherent worth, respect, status equality, freedom to decide and act, and affective needs.

Content validity of the SNBC is evident from item correspondence to concurrent patient interviews. A summary of the three interview categories from a recent study of

110 patient responses (medically-, surgically-, and psychiatric-treated patients) include nurse availability (> 50% of the elicited behaviors), promotion of comfort (20% of the behaviors indicated by patients), and information-giving (15% of the behaviors indicated as important by patients). Discriminant validity is apparent from the different ratings given by different groups of patients. For example, physical comfort measures were important to those with surgical incisions, while nurse attitude was important to medical patients, and moral support and maintaining control were most important to psychiatric patients (Gardner & Wheeler, 1987).

Eight factors of this scale were reported from a study of 110 patients (described above), and include nurse availability (seven items), physical care (ten items), individualized care (four items), information-giving (three items), and professional nursing assistance with maintaining control (three items), morale (three items), confidence (three items), and problem-solving ability (three items) (Gardner & Wheeler, 1987, pp. 127-128). These eight factors explained 90% of the variance of the SNBC responses, and had item loadings > .60, with most subscale internal consistency reliabilities ranging from .71 - .91. Only two factors, information-giving and individualized care, had lower Cronbach alphas, ranging from .61 - .71 (Gardner & Wheeler, 1985). It is believed that the use of the SNBC and the HCI reflects an accurate picture of

patient perceptions of nurse caring behaviors.

Cognitive appraisal. Patients' interpretations of their interactions with nurses was measured by two scales which were named the Primary and Secondary Appraisal Scales (PSAS) (Folkman et al., 1986). The validity of these scales is based on the authors' previous work with threat appraisal, a literature review and extensive respondent interviews (Folkman & Lazarus, 1980). The Primary Appraisal Scale (PAS) is a 12-item, five-point summated likert format (1 = does not apply; 5 = applies a great deal) which measures the individual's interpretation of what was threatened in the encounter (Folkman et al., 1986, p. 994). Two primary factors, threats to self-esteem (six items) or to a loved one's well-being (three items), were determined through principal factor analysis with oblique rotation. Four other items which did not load included those relating to goals at work, potential physical harm, financial strain, and loss of respect for another person. Internal consistency reliability coefficients (Cronbach) were .78 for the first self-esteem factor, and .76 for the second factor. Although the other four items did not load on these two factors, low intercorrelations, ranging from .03 to .29 were reported.

The Secondary Appraisal Scale (SAS) is a four-item, five-point likert scale (1 = does not apply; 5 = applies a great deal) (Folkman et al., 1986). This scale was previously used in a separate study which used a

dichotomous answer format (Folkman & Lazarus, 1980), and the changed scoring procedure limited reliability estimations. However, very low inter-item correlations were reported (.00 to .14), except for two items (13 and 14) measuring opposite components of the changeability of the situation ($r = -.49$); this supports previous research findings (Folkman & Lazarus, 1980). Each of the primary and secondary cognitive appraisal scales were scored separately. Coping strategies have been shown to be directly affected by the person's appraisal of the situation, since problem-focused forms of coping are often reported in changeable situations (Folkman et al., 1986). These coping strategies will be discussed next.

Coping strategies. A published, modified version of the Coping Strategies Inventory (CSI), a 52-item, four-point summated likert scale measured methods used to deal with hospital stress (Quayhagen & Quayhagen, 1988). Total potential subscale scores range from 8 to 32, depending on the ranking of each item. Answers range from "very likely" (1) to "not at all likely" (4). The modified version does not include an earlier affective subscale and thus avoids multicollinearity with the psychological distress outcome measure. The modified version also has an additional four-item spirituality subscale, and six other eight-item subscales, including fantasy, help-seeking, problem solving, existential growth, self-blame, and minimization of threat. Internal reliability coefficients range from

.57 (minimization of threat) to .79 (religiosity and existential growth), with five of the seven subscale internal reliability (Cronbach alphas) over .75 (Quayhagen & Quayhagen, 1988).

The items in the original scale were based on previous coping research, and Pearlin and Schooler's (1978) conceptualization of coping provided the framework. This version of the instrument was used with 218 healthy, community-residing adults in the Southwestern United States (Quayhagen & Quayhagen, 1982). Original interscale correlations were low (ranging from .01 to .32). Coping strategies accounted for an additional 17% of the variance of the degree of stress impact (using the Kilpatrick and Cantril Ladder Scale, cited in Quayhagen & Quayhagen, 1982). Additionally, this sample indicated that they used different coping strategies, depending on age and gender (e.g., women used more help-seeking behavior than men; older adults used affectivity with greater stress reduction than younger groups, who relied on "problem and help-seeking strategies" to resolve interpersonal conflict) (Quayhagen & Quayhagen, 1982, pp. 373-375). Since these and other demographic characteristics often depend on the context of the event (Lazarus & Folkman, 1984), the influence of these factors on this sample of hospitalized patients was compared to determine the generalizability of these effects.

Psychological distress. The Brief Symptom Inventory

(BSI) is a shortened version of the SCL-90-R, a valid and reliable measure of clinically-relevant psychological distress of both psychiatric and non-psychiatric groups (Derogatis, 1977). It has been used with medically-treated patients, as well as those who are having other health-related problems. This 53-item, five-point, summated, likert scale (scored zero to four) has responses ranging from "not-at-all" (0) to "extremely" (4). The author has participated extensively in measurement of psychological stress and other types of instrument development. The BSI has nine subscales, which include somatization, obsessive-compulsive tendencies, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. Each subscale may be scored separately, and three global scores may also be calculated. These include a global severity index, a positive symptom distress index, and a positive symptom total. The global severity index is considered the best single indicator for a summary of psychological distress, and will be used in this study. It is calculated by summing responses to all items, then dividing by the total number of responses.

Concurrent validity of the revised (SCL-90-R) instrument and the MMPI was evident with subscale correlations ranging from .40 to .75 (Derogatis, Rickels, & Rock, cited in Derogatis, 1977). In another review by this same author, the Middlesex Hospital Questionnaire was shown to have moderate to high subscale correlations with the

SCL-90-R; these ranged from .36 to .92. This same report indicated that discriminant validity was evident in this instrument's widespread use with different samples, and in one study with 1,002 psychiatric outpatients, the instrument's factors substantiated theoretically-relevant categories (factor loadings > .30).

Reliability with the SCL-90-R instrument was evident from psychiatric outpatient test-retests ranging from .78 to .86. High internal consistencies (coefficient alpha) reported with a large volunteer sample ranged from .77 to .90. The shortened version (BSI) has had high correlations with the SCL-90-R, ranging from .92 to .99, and its brevity makes it preferable to the 90-item version for this sample of hospitalized patients.

Overall coping effectiveness. Coping effectiveness was measured by the unidimensional McNett Coping Effectiveness Questionnaire (MCEQ) (McNett, 1987). This instrument was developed from qualitative input from 52 graduate nursing students. Nine items have two responses on two five-point, summated likert scales. The first answer corresponds to the degree the particular coping attribute was experienced by the respondent (not at all = 1; a great deal = 5), and the second answer refers to the degree of perceived "importance of the attributes in determining effectiveness of the coping efforts" (1 = not important; 5 = very important) (McNett, 1987, p. 100). The product of these two scores is added to obtain an index of

coping effectiveness.

Pilot studies of wheelchair-bound individuals and another with graduate nursing students (McNett & Pierce, cited in McNett, 1987) determined alpha reliability coefficients of approximately .90. Construct validity was established in both pilot studies by correlating the coping effectiveness of the MCEQ with a single item referring to the individual's ability to cope with or manage the situation effectively. The correlations ($p < .01$) over three separate studies ranged from .54 to .78.

Demographic information. Demographic information included each patient's age, years of education, number of times hospitalized over a lifetime as well as during the past year, the current number of hospital days since admission, gender, annual income, type of employment (United States Census Bureau, 1980), ethnicity, marital status, years married, number of living children, and degree of spirituality or religiosity. These variables have been studied in previous self-esteem, interactional, and stress research with variable results (Ben-Sira, 1980; Brown, 1981; Nelson-Wernick et al., 1981; Volicer & Burns, 1977).

Summary of the instruments to be completed by the respondents. Eight questionnaires were used with study participants. The number of items on each questionnaire ranged from nine to fifty-three, comprising a total number of 243 items (including 11 demographic items). Many of the

scales had a similar answer format; likert or dichotomous responses. Therefore, most of the respondent instructions were similar. During the pilot study, respondents reported that it took approximately 45 minutes to complete the entire packet, depending on the respondent's conscientiousness, motivation, reading ability, and number of interruptions. The pilot testing with 20 participants also helped to determine the best way to present the items. Since the packet contained a large number of questions to respond to during hospitalization, the test was not timed, and the investigator was available by phone to answer questions. A pre-scheduled questionnaire pick-up appointment was also made to discuss participant concerns.

There are two measures that were used by the investigator to determine subject inclusion. The validity and reliability of these instruments will be discussed next.

Screening Measures

Mental status exam. The Short Portable Mental Status Questionnaire (MSQ) is a unidimensional, 10-item short answer scale which takes about 5-10 minutes to administer (Kahn, Goldfarb, Pollack, & Peck, 1960). Items are scored zero to one (0 = correct; 1 = incorrect), and a summated score of incorrect responses is used for interpretation. The respondent has intact mental functioning with 0-2 errors (the maximum allowable score for this study), mild impairment with 5-7 errors, and moderate impairment with

8-10 errors. The scoring system corrects for educational and cultural (race) variance, since it is recommended that one less error is allowed for respondents with education post-high school, and one more error is allowed for black respondents. The MSQ was developed using older respondents in the community and patients hospitalized for psychiatric illness (Foreman, 1987). Test-retest correlations range from .80 to .83, interrator reliability has been reported as .62 to .87, and the internal consistency alpha is .897. Although a recent review of three mental status scales determined that the MSQ was less sensitive (ratio of those with the condition who actually obtain a low score), specific (differentiating ability), and comprehensive than other comparable mental status scales (Foreman, 1987), its brevity makes it desirable for a study using a lengthy questionnaire packet. Criterion and construct validity was established by this same author, who reported that the MSQ had Spearman correlation coefficients around .71 and high Pearson Product Moment correlations with six components of the Mini-Mental State Exam and the Cognitive Capacity Screening Exam (including consciousness, orientation, attention, thought process, content, memory, and general knowledge). This same author has previously reported high correlations with clinical diagnoses of organic brain syndrome (.63, $p < .001$), and concurrent validity with another mental status questionnaire by Pfeiffer (Pfeiffer, 1975). A copy

of the MSQ is included in Appendix C.

Pain approximation. Johnson, Dabbs, and Leventhal (1970) reported the use of a Pain Thermometer, a one-item response that estimates the patient's degree of pain on a scale of 1-100. A score less than or equal to 50 is considered minimal, and moderate pain scores are over 50. Validity of the measure was determined by a significant correlation between preoperative fear and pain scores. Reliability has not been reported and may not be warranted (see Appendix C).

Procedure

Method of gaining entry. Human subject review approval was obtained from the University of San Diego and both medical facilities. Consultation with the appropriate hospital administrators and the Nursing Research Review Boards assisted with the choice of adult units for this research. Nursing administrative and staff contact on each unit preceded data collection.

Human subjects consent information. After obtaining the necessary approval, as discussed above, informed, written consent was obtained from each potential subject who met inclusion criteria (Appendix D). It was determined that the consent reading level was at the ninth to tenth grade level, which further confirms the necessity of participant high school completion (Fry, 1968). Those who did not meet selection criteria, or who were too ill to participate, had similar diagnoses and ethnic backgrounds

to those who participated. As part of the informed consent process, subjects were informed about the investigator's name, the study's purpose, what was involved (e.g., time, number of questions, administration procedures), and the confidentiality and anonymity of their participation. The method of questionnaire retrieval was discussed, and the principal investigator's telephone number was left with each respondent.

The data was stored in a locked file in the investigator's office, and all coding sheets were destroyed after data analysis. Only aggregate data was used for discussion of results. Voluntary participation was stressed, and the subjects were informed of their rights to withdraw at any time, without jeopardy to themselves or to their care. Questions were read and written for only two subjects, after providing for the respondents' privacy.

Risks could have included fatigue, which may lead to increased pain. Benefits accrued from participation include participant satisfaction from assisting with research, particularly since it includes the possibility of influencing future hospitalizations of one's self, family, and/or friends, through publication of the results. The findings may influence hospital routines (e.g., increased emphasis of caring by professionals, longer visiting hours, etc.). Participation also provided an opportunity for the subject to ventilate negative or share positive interactions about nurses. Therefore, the risks were

present-oriented, and directly relate to patients' current physical and emotional status, while benefits were both present- and future-oriented.

A short interview followed each testing session, to determine if subjects were experiencing unpleasant feelings. During the pilot study, one patient reported having adverse feelings which related to the psychological components of the questionnaire packet (BSI). This was brought to the attention of the primary physician, and discussed together with the patient. In order to correct for this possible misinterpretation of the BSI directions, the questionnaire packet was altered to highlight the instructions preceding the BSI. The new directions indicated that patients should relate these feelings only to their interaction with the registered nurse. Due to this change, the pilot study data was excluded from final data analyses. No other adverse feelings were registered during the formal data collection period.

Procedure for administration of measures. Data was collected once from each patient between July and November, 1989. At least 2 days following admission (but not over 2 weeks), inclusion criteria (i.e., age and medical status) were determined, and the patient was approached for the possibility of participation in the study. Following informed consent, the patient's sensorium (MSQ) and pain status (Pain Thermometer) were evaluated. Demographic information preceded the other questionnaires, which were

ordered to avoid close placement of conceptually-similar topics (e.g., foundational and functional self-esteem levels), yet facilitate responses by placing similar answer formats together. Assistance was provided to two patients who were unable to fill out the entire questionnaire packet.

Data collection procedure. A pilot study of 20 patients preceded the formal study to determine the feasibility of the sampling plan and to field test the measures and data collection form (Prescott & Soeken, 1989). Following the pilot study, the aforementioned change was made in the BSI instructions. The questionnaire packet was hand-delivered to respondents by the investigator and trained research assistants, and the consent form was explained after determining if the patient was interested in filling out a questionnaire packet. Then, examples of selected items were reviewed, and the participant perused statements on the questionnaires. Respondents were asked to recall a recent encounter with a registered nurse (someone who had the greatest effect on them, whether it was a caring or noncaring encounter), and answer the questions in relation to the interaction(s) with this person. Generally, packets were picked up at a specified time and place by the investigator. In a few cases participants left completed packets at a conveniently-located place. The packets were generally left with the patient overnight, since it took

approximately 45 minutes of uninterrupted time to complete all the questionnaires. The packets were returned prior to discharge, to decrease the error inherent in attempts to recall situational circumstances. The investigator was available (in person or by phone) if respondents had any questions concerning the items or the instructions.

Data Analysis Techniques

Description of statistical tests. Data analysis included both descriptive and correlative techniques. All demographic information was analyzed with the SPSSX (1988) Descriptive Program, including frequencies, percentages, and other descriptive statistics (e.g., means, standard deviations), and scattergrams were run to determine normal distribution and linearity of data for all variables. Pearson product-moment correlations of all variables, and residual scatterplots of endogenous variables and error terms were analyzed (Tabachnick & Fidell, 1983).

Following data description, reduction was accomplished with four scales: the HCI, SNBC, cognitive appraisal (PSAS) and McNett Coping Effectiveness Questionnaire (MCEQ). After checking internal consistency and the absence of multicollinearity, multiple regression analysis was completed, with simple inclusion of each endogenous variable, beginning with X_3 in the second time ordering. Beta weights of .10, with probability levels of at least .05 were considered salient (Lund, cited in Munro, Visintainer, & Page, 1986). The coefficient of

determination (R^2 or the adjusted R^2 , if significantly different) determined the proportion of variance of each criterion variable explained by predictor variables. This was examined for variables entered in each equation (Tabachnick & Fidell, 1983). The multiple regression coefficient determined the strength of the relationship between the variance of predictors and the criterion variables. Beta weights, reaching at least .05 probability level, were placed on the hypothesized model, and a decomposition table was constructed to determine each prior variable's total effect (direct and indirect) on each subsequent variable. Based on the above analyses, hypotheses were either accepted or rejected. Finally, the simplified causal model was reconstructed as necessary and compared to the hypothesized model (Asher, 1983; Tatsuoka, 1988). The discussion also considered the influence of each of the variables, contrasted the findings with previous research, and determined possible implications for future nursing research, practice, and education.

Interpretation of key elements. All demographic variables, with the exception of age, pain levels and self-esteem, were treated in a similar manner. After determining the median age of the sample, differences between the younger age group (approximately 25-45) were compared with the older age group (approximately 46-65). MANOVA was used to identify group differences with each of

the exogenous and endogenous variables within the proposed model (using $p < .05$). Patients reporting pain over 50 were compared in a similar way to the other two groups (minimal or no pain) in order to determine group differences.

In addition, since moderate variations in self-esteem levels were found, the sample was divided into two comparably sized groups to reflect low versus high levels of self-esteem within this sample, and MANOVA was used to determine group differences on selected variables. Examination of two groups with different self-esteem levels was based on previous research which reported significant changes in functional self-esteem levels after a manipulation designed to alter foundational self-esteem levels was administered (Zellner, 1970). The effects of this variable on patient ratings of humanistic caring and coping effectiveness was also determined.

Assumptions of statistical tests. ANOVA assumptions include independent, random, comparison groups, interval level dependent variable data, and a normal distribution and homogeneous variance of the population from which the samples are chosen (Munro et al., 1986). The first assumption was partially met. Although the effects of different age groups was compared, random selection was not used. Interval level data is present in all variables, and other assumptions (related to normal distribution of data and homogeneity of variance) were checked during descriptive

and correlational analyses; these statistical analyses also satisfied multiple regression assumptions. These analyses included tests of linear relationships between variables and the normal distribution of data (Asher, 1983). Techniques used to determine these assumptions include scattergrams and the SPSSX (1988) Descriptive Program. Standard errors for skewness and z distribution calculations were determined. Four z distributions beyond ± 2.58 led to a rejection of the normal distribution assumption, and data transformation was completed (Tabachnick & Fidell, 1983, p. 79). Other multiple regression assumptions, such as homoscedasticity between independent variables and error terms, was checked with residual scatterplots using SPSSX. This program was also used to test for error term auto-correlations in order to note significant covariate effects (Asher, 1983; SPSSX, 1988).

Another multiple regression assumption, such as multicollinearity ($r > .60$), between each pair of variables was determined by bivariate correlations. This was not found. However, if present, these correlations would have been analyzed to determine meaningful interpretation of the substantive content of the dimensions measured by the instruments which would have resulted in either the use of composite scores of highly-correlated variables or deletion of one of the measures.

Following necessary corrections to meet these

assumptions, ordinary, multiple regression analysis was completed, as described above. The results section indicates the order of application of the above statistical tests and outcomes.

Limitations

The stringent inclusion criteria for subjects was built into the design to establish internal validity for confirmation of the hypothesized model. Therefore, external validity (generalization) was limited in scope in order to emphasize high internal validity (linking power) for the relationships in the newly-proposed model (Krathwohl, 1985, p. 130). Internal and external validity concerns which were recognized during the proposal stage (fatigue, length of questionnaire packet, instrumentation, and the use of a nonprobability sample) are addressed in the discussion section.

Chapter Four

Results

Data Reduction

Factor analysis was performed to reduce data and define latent constructs with four of the relatively new measures, the HCI, SNBC, PSAS, and MCEQ (Nunnally, 1978; Tabachnick & Fidell, 1983). Psychometric properties were then reaffirmed for all other instruments to verify reliability with this sample of hospitalized patients.

After ruling out multicollinearity (coefficient $r > .60-.70$) (Asher, 1983) between all variables, factor analyses first included checking item communalities ($> .50$) on the four new instruments to verify the appropriateness of the use of principle components analysis with varimax rotation. Eigenvalues > 1.0 and the scree test assisted in determining the number of factors (Munro et al., 1986). Factor loadings $> .35$ were accepted, and each factor solution was inspected for simple structure. Factors were then examined for meaningful interpretability and independence, as indicated by low to moderate correlations with other subscales (Tabachnick & Fidell, 1983).

Reliability estimation on all the tools included mean inter-item correlations $\geq .25$, item-total correlations

$\geq .35$, and Cronbach's alpha $\geq .60$ to establish parsimonious, reliable factors. Finally, a correlation matrix of all variables to be entered into multiple regression was inspected for multicollinearity (Nunnally, 1978; Pedhazur, 1982). Factor analysis of the four measures will be discussed first.

Holistic Caring Inventory Factor Analysis

Four HCI factors were found to meet the above criteria and explained 56.6% of the variance of the total scores. Simple structure was present except for two items, and all but one item had high factor loadings. This item, number 11, was deleted from further analysis due to the lack of factor loading (not higher than .19), and poor item-total correlation. On closer inspection of this item, it was determined that the item has many different interpretations, depending on the individual's need or preference to be alone or with others, in this case, health care providers.

The resulting four factors had meaningful interpretability; factor one exemplified caring about the patient's physical status, ("physical caring"); factor two delineated the nurse's role in interpreting the potential impact of patients' condition and resultant feelings ("interpretive caring"); factor three reflected caring about patients' spiritual needs ("spiritual caring"); and factor four related to the nurse's sensitivity to patients' feelings and individuality ("sensitive caring"). Factor loadings for each of the four subscales are displayed in

Table 1.

Further psychometric evaluation of the four subscales indicated low to moderate interscale correlations ranging from .11 to .58. Cronbach alphas, mean inter-item correlations and item-total correlations, as indicated in Table 2, all met the prespecified criteria. The strength of these findings is surprising given the low subject:item ratio (less than 5:1) in this study (Tabachnick & Fidell, 1983).

Inspection of the mean final scores for each dimension indicated that physical and sensitive caring were more evident ($X = 3.02$, $s.d. = .40$ and $X = 3.04$, $s.d. = .47$), than interpretive and spiritual caring ($X = 2.54$, $s.d. = .53$ and $X = 2.3$, $s.d. = .62$). Overall, these scores indicate that moderate amounts of caring were perceived by patients.

Supportive Nursing Behavior Checklist

Confirmatory factor analyses with this instrument did not reaffirm the previously-reported eight subscales (Gardner & Wheeler, 1987) but did support unidimensionality. Initial factor loadings lacked simple structure. Exploratory factor analysis revealed seven eigenvalues over 1.0, and a seven factor solution was attempted. This factor solution was not satisfactory since there was an uneven distribution of items and a lack of items that loaded on two of the seven potential factors. Principal component analyses with varimax rotation failed to converge with less than seven factors. In addition, the interscale

Table 1

Rotated Factor Matrix for Holistic Caring Inventory

Item	Factor 1 Physical Caring	Factor 2 Interpretive Caring	Factor 3 Spiritual Caring	Factor 4 Sensitivity to Individuals
1	.73			
2	.75			
3	.76			
4	.82			
5	.62			
6	.61			
7	.44			
8	.72			
9	.80			
10	.66			
13		.48		
15		.62		
19		.70		
21		.79		
22		.66		
23		.39		.37
25		.79		
26		.48		
27		.66		
28		.66		
29		.71		
31			.76	
33			.84	
34			.87	
35			.67	
36			.87	
37			.50	
38			.83	
39			.76	
40			.48	
12				.75
14				.65
16				.72
17				.75
18				.66
20				.62
24	.40			.65
30				.49
32				.64
11	.11	.11	.09	-.19

Table 2

Mean Inter-item and Item-total Correlations and Reliability Estimations For All Scales

Name of Instrument	Name of Subscale	Mean Inter-item Correlation	Item-total Correlation Range	Standardized Alpha (Cronbach's)
Rosenburg's Self Esteem Scale	None	.34	.39-.64	.84
Krantz Health Opinion Survey	Behavior subscale	.29	.32-.58	.78 ⁺
	Information subscale	.27	.25-.54	.72 ⁺
Holistic Caring Inventory	Physical caring component (10 items)	.49	.49-.79	.90
	Interpretive caring component (11 items)	.41	.39-.79	.89
	Spiritual need caring component (9 items)	.54	.60-.87	.91
	Sensitivity to individual feelings and needs (9 items)	.50	.54-.71	.90
Supportive Nursing Behavior Checklist	None	.31	.36-.72	.97
Primary Appraisal Scale	None	.45	.47-.80	.91
Secondary Appraisal Scale			.36-.65	.73
Coping Strategies Inventory	Problem-focused coping	.43	.49-.76	.95
	Emotion-focused coping	.28	.37-.61	.89
	Spiritual-focused coping	.55	.59-.67	.78
Brief Symptom Inventory	None	.25	.24-.72	.95
McNett Coping Effectiveness Questionnaire	None	.64	.71-.83	.94

⁺Note. Kuder-Richardson was used for the Krantz Health Opinion Survey reliability estimation

correlations from the seven factor solution were high, ranging from .43-.67, with one-third of these over .50 and eight over .60.

A final attempt was made to examine the two component parts of this instrument, the importance versus frequency ratings of the participants, since these two scores had previously been used separately. However, this was abandoned due to multicollinearity between these two scales ($r = .68$, $p < .001$). Unidimensionality was further confirmed with other psychometric testing, such as the mean inter-item correlation and the high reliability of the total score of this instrument. See Table 2. The small subject:item ratio with this large questionnaire may have influenced these results (Tabachnick & Fidell, 1983).

The total mean score of this instrument was used for subsequent analyses, and inclusion of all items explained the majority of the total variance. The importance versus frequency ratings were kept separate only for the MANOVA analyses, since significant group differences were attributable to demographic factors. Median scores were higher for importance ratings of supportive caring activities (< 4.0) than the reported frequency (< 3.0) of these same behaviors. Using a potential score of one to seven, the overall mean score of both of these answers (4.56) indicates that moderate amounts of caring were perceived by patients.

Primary and Secondary Appraisal Scale

The factoring of this scale confirmed the two previously-reported subscales (Folkman et al., 1986). Simple structure and high factor loadings ($\geq +.50$) were present, and these two factors explained 52.8% of the variance. Items 1-13 reflected the Primary Appraisal Scale (PAS) and items 14-17 the Secondary Appraisal Scale (SAS). These findings are depicted in Table 3.

Further factoring was explored on both scales. Analysis of the 13 PAS items revealed two statistically- and conceptually-distinct factors that reflected intrapersonal and interpersonal components. However, the two factors were highly correlated ($r = .67$ $p \leq .001$), suggesting that the scale remain unidimensional. The SAS had only one eigenvalue over 1.0. Other psychometric properties, including the inter-item and item-total correlations and reliabilities, met unidimensional criteria, as listed in Table 2. The low interscale correlation between the unidimensional PAS and SAS ($.44$ $p < .001$) suggested that the scales remain intact and separate. Both scales had low scores; secondary appraisal of available coping options was higher (1.67, s.d. = .84; this corresponds to the rating "sometimes applies") than primary cognitive appraisal of threat scores (1.29, s.d. = .56, approximates the "does not apply" category).

McNett Coping Effectiveness Questionnaire

Exploratory factor analysis of this tool revealed only

Table 3

Primary and Secondary Cognitive Appraisal Scale Factor Loadings

Primary Appraisal Scale	Factor 1	Factor 2
1	.73	
2	.79	
3	.50	
4	.66	
5	.53	
6	.55	
7	.80	
8	.89	
9	.84	
10	.55	
11	.67	
12	.55	
13	.69	
Secondary Appraisal Scale	Factor 1	Factor 2
14		.52
15		.77
16		.78
17		.73

one eigenvalue over 1.0, and this explained 68% of the variance of the total scores. Factor loadings ranged from .78 to .87. The unidimensional scale had excellent psychometric properties, as indicated in Table 2, and was retained for further analyses. Total scores averaged 107 with a possible total score of 225. Previous studies have not reported overall scores, thus limiting comparison. Reliability of the four other scales will be discussed next, beginning with the determination of the CSI dimensions.

Coping Strategies Inventory

Parsimony and reliability of the CSI, used to explain the coping strategies used by respondents, was carefully examined. Reliability estimates of this tool's seven theoretically-relevant subscales met most of the prespecified criteria; however, one-third of the interscale correlations were above or near the critical .60 multicollinearity criterion (see Table 4). The three problem-focused subscales (problem-solving, help-seeking, and existential growth) were combined due to high intercorrelations (coefficients $r > .77$, $p < .001$). Similarly, the three emotion-focused subscales (fantasizing, blaming, and minimization) also had moderately high intercorrelations (coefficients $r > .63$, $p < .001$) and were combined. The spiritual-focused coping factor had relatively low intercorrelations with the other scales, (Table 4) and subsequent reliability analyses confirmed it as a distinct dimension (Table 2).

Table 4

Correlation Matrix of the Original Seven CSI Subscales⁺

Scale	Fantasy (CSI ₁)	Help-Seeking (CSI ₂)	Problem Solving Coping (CSI ₃)	Existential Growth (CSI ₄)	Blame (CSI ₅)	Minimization (CSI ₆)	Spiritual Coping (CSI ₇)
CSI ₁		.44	.46	.43	.70	.64	.46
CSI ₂			.87	.77	.49	.22	.45
CSI ₃				.81	.57	.34	.45
CSI ₄					.54	.29	.52
CSI ₅						.63	.44
CSI ₆							.26

⁺Note. Coefficients $r \geq .22$ are significant at $p \leq .05$

The reliability estimations of the problem-, emotion-, and spiritual-focused coping dimensions indicated that several items did not meet prespecified criteria. Item numbers 46, 52, and 26 were deleted from the spiritual- and emotion-focused scales due to low item-total correlations (coefficients $r = -.13, .25, \text{ and } .33$, respectively). The psychometric properties of each subscale were reexamined after deletion of each item; the item-total r for item 26 dropped to $.33$ after deletion of items 46 and 52. Table 5 compares the overall mean inter-item correlations and Cronbach alphas before and after the deletion of these three items. The chief effect of this item deletion was to greatly improve the reliability of the spiritual-focused coping subscale. The problem-, emotion- and spiritual-focused coping dimensions of the CSI were retained for further data analysis. The mean scores for each dimension were divided by the total possible score for that subscale in order to determine the relative frequency that patients used each type of coping strategy. This sample primarily used emotion-focused coping (69%) followed closely by spiritual- (55%) and problem-focused coping strategies (51%).

Psychometric Properties of the Other Widely-Used Tools

Rosenberg's Self-Esteem Scale (SES), Krantz's Health Opinion Survey (KHOS) and Derogatis's Brief Symptom Inventory (BSI) all had mean inter-item correlations $>.25$ and good reliability estimates (see Table 2). Two KHOS

Table 5

Comparison of CSI Mean Inter-item Correlations and Reliability

CSI Subscale	Intact Scales: Mean Inter-item r	Deletion of Three Items: Mean Inter-item r	Intact Scales: Cronbach's Alpha	Item Deleted and Final Cronbach's Alpha
Problem-focused Coping	.46	.46	.95	.95
Emotion-focused Coping	.28	.30	.90	.90
Religious-focused Coping	.65	.64	.59	.84

dimensions, the behavior and cognitive control subscales, were verified with this sample. However, some of the KHOS and BSI items did not meet item-total correlation criteria.

Four KHOS items, two in each subscale, had item-total correlations less than the .35 level. All were marginally below this criteria, but above $r = .32$, with the exception of one item (number 4) that had a coefficient r of .25. In addition, as is evident in Table 6, the deletion of all four items did not significantly change the mean inter-item correlations or reliability estimates of the two subscales. Based on the minimal change in reliability, the decision was made to keep the two scales intact, as originally written. Each subscale had high total scores (behavior = 11.8, cognitive = 13.2), which were greater than previously-reported self-help course participants (10.75) (Krantz et al., 1980).

The eight items of the BSI which had low item-total correlations reflected five of the nine dimensions of the tool (2-psychoticism, 1-paranoia, 1-phobic anxiety, 2-interpersonal sensitivity, 2-hostility). The instrument was left intact for subsequent analyses because it has been used extensively and it is the abbreviated version which has fewer items depicting certain states of emotional distress. In addition, the BSI had a high reliability estimate with this sample (Cronbach's $\alpha = .95$). The global severity index of distress of this sample was very low (26), as compared to reported levels for other hospitalized

Table 6

Comparison of KHOS Mean Inter-item Correlation and Reliability Estimates Prior To and After Deletion of Four Items

Scale	Intact KHOS Mean Inter-item Correlation	Mean Inter-item Correlations After Deletion of Four Items	Intact KHOS Alpha	Cronbach's Alpha After Deletion of Four Items
Behavior Control Subscale	.29	.31	.78	.78
Information Subscale (Cognitive Control)	.27	.31	.72	.74

psychiatric and medical-surgical patients (scores ranged from 56-72) (Derogatis, 1977).

Results of Data Reduction

The final step was to analyze the correlation matrix for multicollinearity of the fifteen variables which would be entered into the multiple regression equation. This matrix, depicted in Table 7, included the two dimensions of the KHOS (behavior and information-based or cognitive control), four dimensions of the HCI (physical, interpretive, spiritual, and sensitive caring), two dimensions of the PSAS (including both primary and secondary appraisal), and three dimensions of the CSI (problem- and emotion- and spiritual-focused coping). In addition, the unidimensional SES, SNBC, BSI, and MCEQ were included. Examination of this matrix indicated that multicollinearity is not a problem since the bivariate correlations between the variables within the model did not exceed the level of .60-.70 (Asher, 1983). Other statistical tests to determine if path assumptions were met are discussed below.

Statistical Assumptions

Following confirmation of the absence of multicollinearity, distribution and homogeneity of the data were confirmed prior to checking multiple regression analysis assumptions through residual analysis. Barlett Box F tests indicated that the raw data was homogeneous ($p > .05$). Scatterplots indicated nonlinearity of the KHOS, SES, HCI, PAS, and SAS, and calculations for extreme

Table 7

Correlation Matrix for all Variables Within the Model

	KHOS ₁ Behavior Subscale	KHOS ₂ Info Subscale	SES Self Esteem	HCI ₁ Physical Caring	HCI ₂ Interp. Caring	HCI ₃ Spiritual Caring	HCI ₄ Sensi- tivity	SNBCT Sup- portive	PAS Primary Appraisal	SAS Secondary Appraisal	CSI ₁ Problem Coping	CSI ₂ Emot. Coping	CSI ₃ Spirit. Coping	BSI Psych. Distress	MCEQ Coping Effect.
KHOS ₁		.50	-.08	.15	.10	.02	.10	.21	.14	.10	.19	.32	.23	.05	-.01
KHOS ₂			.16	.24	.21	.06	.20	.30	.09	.13	.34	.19	.07	.13	.08
SES				.10	.09	-.05	.16	.11	-.18	.05	.04	-.40	-.20	-.22	.19
HCI ₁					.24	.03	.50	.18	.09	.13	.18	.14	.06	.10	.01
HCI ₂						.41	.50	.24	.16	.00	.13	-.02	.03	.00	.20
HCI ₃							.26	.14	.08	-.08	-.01	-.03	.34	-.08	.11
HCI ₄								.39	.14	-.02	.18	-.01	.19	-.02	.25
SNBCT									.30	.22	.37	.16	.13	.19	.42
PAS										.38	.22	.36	.16	.36	.10
SAS											.20	.15	.04	.21	.08
CSI ₁												.49	.51	.34	.29
CSI ₂													.44	.37	-.10
CSI ₃														.21	.00
BSI															-.05
MCEQ															

Note. Coefficients $r \geq \pm .15$ are significant at the $p \leq .05$ level
KHOS₁=Behavior subscale of the Krantz Health Opinion Survey
KHOS₂=Information subscale of the Krantz Health Opinion Survey
SES=Rosenburg's Self-Esteem Scale
HCI₁-HCI₄=Four subscales of the Holistic Caring Inventory
HCI₁=Physical care
HCI₂=Interpretive caring
HCI₃=Spiritual caring
HCI₄=Sensitive Caring

SNBCT=Supportive Nursing Behavior Checklist
PAS=Primary Appraisal Scale
SAS=Secondary Appraisal Scale
CSI₁-CSI₃=Three subscales of the Coping Strategies Inventory
CSI₁=Problem-focused strategies
CSI₂=Emotional-focused strategies
CSI₃=Spiritual-focused strategies
BSI=Brief symptom inventory
MCEQ=McNeill's Coping Effectiveness Questionnaire

skewness ($z \pm 2.58$) were noted for five of the scales, the KHOS (-12.24), SES (-4.43), PAS (11.57), SAS (5.43), and BSI (7.24). Nonlinearity and excessive skewness were corrected by logarithmic transformation of these scales (Tabachnick & Fidell, 1983).

The effects of the variables external to the model, called error terms, were calculated for each of the endogenous variables, and ranged from .784 to .986. Linear regression assumes that the effects of these error terms or residuals are normally distributed about a zero mean, demonstrate equality of variance, independence, fixed distribution, and linearity. Two of these assumptions, zero mean and independence, must be met and will be discussed first (Pedhazer, 1982; Verran & Ferketich, 1987).

The histogram of the residuals was normally distributed about the mean. The zresidual mean value was .00. Independence was confirmed by examination of scatterplots of the residuals and dependent variables, which indicated random scatter about the zero line (Pedhazer, 1982; Tabachnick & Fidell, 1983). Scatterplots of residuals of each variable indicated equality of variance, linearity, and fixed distribution. This was confirmed by the equal, random scatter of residual points about the zero line and the lack of a curve across this line (Verran & Ferketich, 1987). Further support of independence and the lack of residual autocorrelation was confirmed by a significant Durbin-Watson Test (2.1296) (Wesolowsky, 1977). Finally, Cook's D and the

Lever tests were examined for outliers. Three subjects' responses were deleted due to values beyond ± 2.39 . The deletion of outliers increased common variance among the variables and strengthened regression results.

Path Analysis

Path analysis was used to test the hypotheses. Prior to discussing these results, criteria for inclusion of variables with significant direct effects in the simplified model and tables which examine direct and total effects will be presented.

Criteria for inclusion of each variable in the model included a beta weight of .10, with a significance level of at least .05 (Asher, 1983). The amount of variability (R^2) accounted for by the variables in each equation, and the adjusted R^2 (based on sample size) was examined, as depicted in Table 8. The direction and prediction of the direct effect of each variable in the model which met the above criteria is depicted in the simplified path diagram (see Figure 4). There were 16 direct effects. Table 9 summarizes the direct effects (path coefficients or beta weights) for all variables, and indicates those that were significant. A decomposition table was constructed (Table 10) to analyze the indirect and total effects between each of the variables. Column A presents the total bivariate correlation coefficients while column B presents the direct effects. These direct effects are the beta weights or path coefficients from the regression analysis, as previously

Table 8

Beta Weights and Regression Coefficients in Standardized Form For Simplified Model

Predictor (Independent) Variable	Criterion (Dependent) Variable							
	SNBC	PAS	SAS	PROB	EMOT	RELIG	BSI	MCEQ
Behavior Subscale (KHOS)						.24*		
Cognitive Subscale (KHOS)	.22*			.22*				
Self-esteem (SES)					-.36***			
Physical Caring (HCI)								
Interpretive Caring (HCI)						-.29**		
Spiritual Caring (HCI)						.33***		
Sensitive Caring (HCI)								.26*
Supportive Caring (SNBC)		.27**	.25*	.27**				.30***
Primary Appraisal (PAS)					.24**		.24*	
Secondary Appraisal (SAS)								
Problem-focused Coping (PROB, CSI)								
Emotion-focused Coping (EMOT, CSI)								.56***
Spiritual-focused Coping (RELI, CSI)								-.32**
Psychological Distress (BSI)								-.19*
R ²	.01	.14	.09	.21	.34	.22	.27	.47
+ Adjusted R ²	.06	.08	.03	.14	.28	.15	.18	.40
F	3.72	2.25	1.38	2.93	5.54	3.06	3.01	6.77

*p≤.05

**p≤.01

***p≤.001

+Note. p≤.05 if adjusted R² >.06

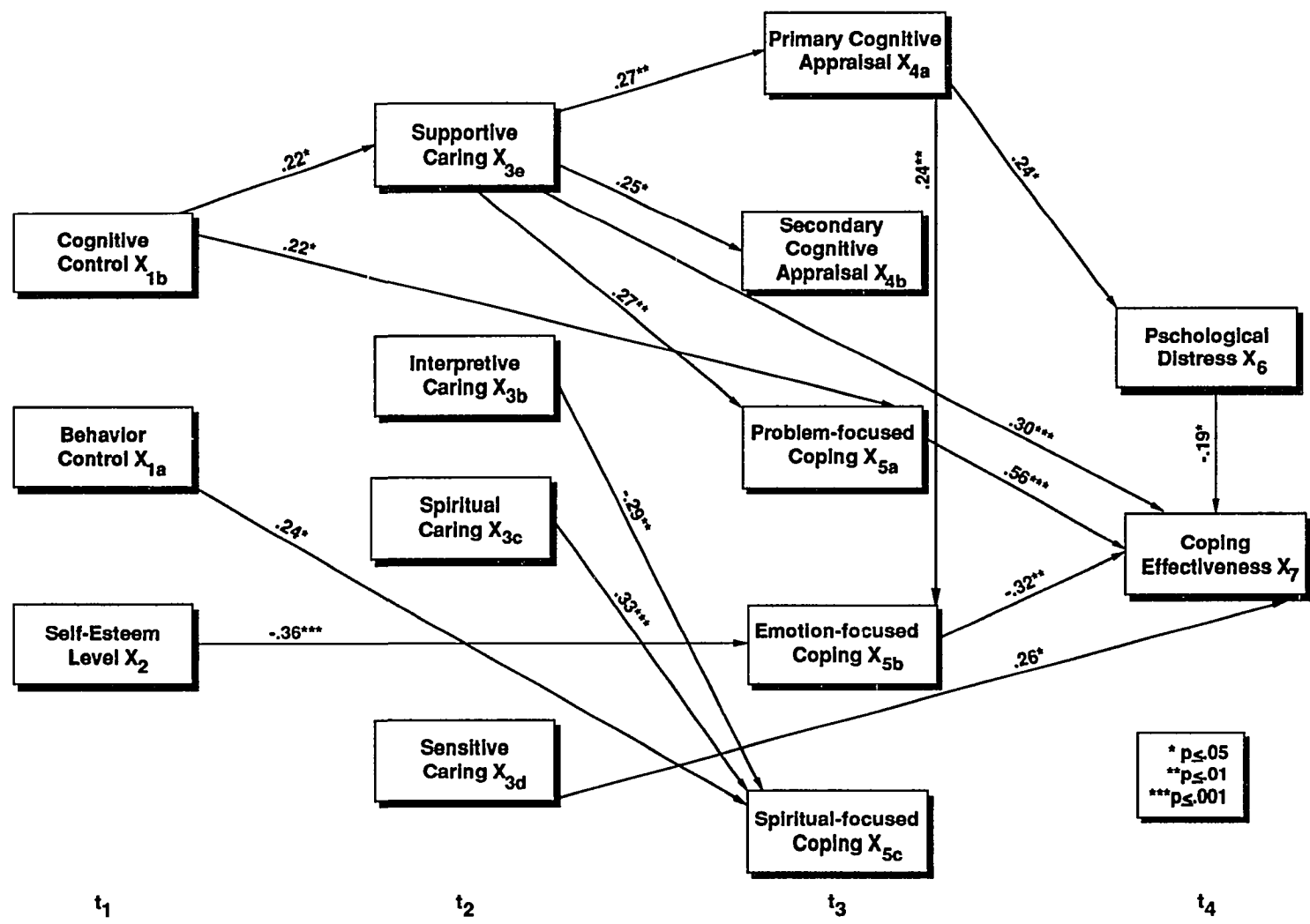


Figure 4. Simplified Path Model Relating Coping Effectiveness to Predictor Variables (path coefficients > .10)

Table 9

Matrix of Direct Effects

Variable	X3a	X3b	X3c	X3d	X3e	X4a	X4b	X5a	X5b	X5c	X6	X7
X1a Self-care Behavior	.08	.01	-.02	.07	.11	.05	.01	.01	.17	.24*	-.17	-.05
X1b Cognitive Control	.18	.17	.08	.13	.22*	.02	.04	.22*	.10	-.02	.12	-.10
X2 Self-esteem Level	.07	-.04	-.12	.12	.03	-.18	.03	-.03	-.36***	-.08	-.11	.002
X3a Physical Caring						.02	.16	.06	.13	-.06	.08	-.10
X3b Interpretive Caring						.08	.002	.05	-.08	-.29**	-.12	-.04
X3c Spiritual Caring						-.01	-.08	-.09	-.03	.33**	-.14	.11
X3d Sensitive Caring						.03	-.17	-.05	-.03	.23	-.08	.26*
X3e Supportive Caring						.27**	.25*	.27**	.08	-.03	.08	.30***
X4a Primary Appraisal								.10	-.24**	.12	.24*	.04
X4b Secondary Appraisal								.06	.03	-.02	.04	.05
X5a Problem-focused Coping											.17	.56***
X5b Emotion-focused Coping											.07	-.32**
X5c Spiritual-focused Coping											.14	-.17
X6 Psychological Distress												-.19*
X7 Coping Effectiveness												

*p<.05

**p<.01

***p<.001

Table 10

Decomposition Table of Effects of Variables

		Causal Effects			
	Total Covariance (A)	Direct Effects (B)	Indirect Effects (C)	Total Effects (B+C) (D)	Non-Causal Effects (A-D) (E)
<hr/>					
Coping Effectiveness (X7)					
X7X6	-.053	-.188*	None	-.188	-.241
X7X5c	-.002	-.167	None	-.167	-.169
X7X5b	-.099	-.323**	None	-.323	-.422
X7X5a	.289***	.563***	None	.563	-.274
X7X4b	.080	.046	.037	.083	-.003
X7X4a	.100	.036	-.090	-.054	.046
X7X3e	.419***	.296***	.116	.412	.007
X7X3d	.247**	.255*	-.063	.192	.055
X7X3c	.113	.111	-.094	.017	.096
X7X3b	.204*	-.037	.095	.058	.146
X7X3a	.005	-.100	.008	-.092	.097
X7X2	.194*	.002	.002	.004	.190
X7X1b	.076	-.100	.023	-.077	-.001
X7X1a	-.010	-.048	.008	-.040	.030
Psychological Distress (X6)					
X6X5c	.206*	.139	None	.139	.067
X6X5b	.371***	.071	None	.071	.300
X6X5a	.343***	.165	None	.165	.178
X6X4b	.205*	.037	None	.037	.168
X6X4a	.357***	.238*	None	.238	.119
X6X3e	.188*	.075	.136	.211	-.023
X6X3d	-.018	-.083	.023	-.060	.042
X6X3c	-.080	-.136	.025	-.111	.031
X6X3b	-.002	-.012	-.017	.054	-.056
X6X3a	.102	.082	.024	.106	-.004
X6X2	-.215**	-.113	.007	-.106	-.109
X6X1b	.127	.121	.038	.159	-.032
X6X1a	.050	-.172	.019	-.153	-.103
(Table continues)					

(Table continues)

Table 10 (Continued)

Decomposition Table of Effects of Variables

		Causal Effects			
	Total Covariance (A)	Direct Effects (B)	Indirect Effects (C)	Total Effects (B+C) (D)	Non-Causal Effects (A-D) (E)
Spiritually-focused					
Coping (X5c)					
X5cX4b	.037	-.021	None	-.021	.058
X5cX4a	.164	.122	None	.122	.042
X5cX3e	.132	-.028	.003	-.025	.157
X5cX3d	.193	.228 ⁺	-.021	.207	-.014
X5cX3c	.340	.331**	-.008	.323	.017
X5cX3b	.033	-.291**	.0002	-.219	.252
X5cX3a	.060	-.059	-.002	-.061	.121
X5cX2	-.199	-.079	.000	-.079	-.120
X5cX1b	.074	-.024	.009	-.015	.089
X5cX1a	.234	.243*	.003	.246	-.012
Emotion-focused					
Coping (X5b)					
X5bX4b	.148	.026	None	.026	.122
X5bX4a	.362***	.244**	None	.244	.118
X5bX3e	.158	.076	.072	.148	.010
X5bX3d	-.008	-.034	.004	-.030	.022
X5bX3c	-.027	-.032	-.004	-.036	.009
X5bX3b	-.015	-.079	.020	-.059	.044
X5bX3a	.138	.131	.008	.139	.277
X5bX2	-.397***	-.357***	.007	-.350	-.047
X5bX1b	.192**	.098	.024	.122	.070
X5bX1a	.320*	.171	.012	.183	.137

(Table continues)

Table 10 (Continued)

Decomposition Table of Effects of Variables

		Causal Effects			
	Total Covariance (A)	Direct Effects (B)	Indirect Effects (C)	Total Effects (B+C) (D)	Non-Causal Effects (A-D) (E)
Problem-focused Coping (X5a)					
X5aX4b	.200*	.057	None	.057	.163
X5aX4a	.212*	.096	None	.096	.116
X5aX3e	.372***	.267**	.040	.307	.065
X5aX3d	.176	-.052	-.007	-.059	.235
X5aX3c	-.005	-.085	-.005	-.090	.085
X5aX3b	.127	.050	.008	.058	.069
X5aX3a	.181	.064	.010	.074	.107
X5aX2	.040	-.031	.004	-.027	.067
X5aX1b	.338	.216*	.011	.227	.111
X5aX1a	.188	.013	.005	.018	.170
Secondary Cognitive Appraisal (X4b)					
X4bX3e	.218**	.250*	None	.250	-.032
X4bX3d	-.017	-.174	None	-.174	.157
X4bX3c	-.077	-.076	None	-.076	-.001
X4bX3b	-.001	.002	None	.002	.001
X4bX3a	.133	.161	None	.161	-.028
X4bX2	.049	.031	.016	.047	.002
X4bX1b	.134	.040	.057	.097	.037
X4bX1a	.095	.013	.027	.040	.055
Primary Cognitive Appraisal (X4a)					
X4aX3e	.296***	.272**	None	.272	.024
X4aX3d	.140	.033	None	.033	.107
X4aX3c	.083	-.010	None	-.010	.093
X4aX3b	.159*	.083	None	.083	.076
X4aX3a	.085	.015	None	.015	.070
X4aX2	-.175*	-.180 ⁺	.031	-.149	-.026
X4aX1b	.087	-.0004	.081	.081	.006
X4aX1a	.139	.047	.034	.081	.058

(Table continues)

Table 10 (Continued)

Decomposition Table of Effects of Variables

	Total Covariance (A)	Causal Effects		Total Effects (B+C) (D)	Non-Causal Effects (A-D) (E)
		Direct Effects (B)	Indirect Effects (C)		
Supportive Nursing Behaviors (X _{3e})					
X _{3e} X ₂	.105	.031	None	.031	.074
X _{3e} X _{1b}	.295***	.224*	None	.224	.071
X _{3e} X _{1a}	.208*	.106	None	.106	.102
Nurse Sensitivity (X _{3d})					
X _{3d} X ₂	.160*	.115	None	.115	.045
X _{3d} X _{1b}	.200*	.127	None	.127	.073
X _{3d} X _{1a}	.099	.070	None	.070	.029
Spiritual Caring (X _{3c})					
X _{3c} X ₂	-.051	-.122	None	-.122	.071
X _{3c} X _{1b}	.056	.084	None	.084	-.028
X _{3c} X _{1a}	.023	-.016	None	-.016	.039
Interpretive Caring (X _{3b})					
X _{3b} X ₂	.085	-.037	None	-.037	.122
X _{3b} X _{1b}	.201*	.169	None	.169	.032
X _{3b} X _{1a}	.098	.012	None	.012	.036
Physical Caring Component (X _{3a})					
X _{3a} X ₂	.0198	.0004	None	.0004	.098
X _{3a} X _{1b}	.243**	.180	None	.180	.063
X _{3a} X _{1a}	.149	.079	None	.079	.070

*p≤.05

**p≤.01

***p≤.001

noted on the revised, simplified path diagram (Figure 4). The indirect effects (C) are calculated by adding the multiplicatives of the beta coefficients of each of the indirect pathways. Three graphic representations of these indirect pathways, beginning with each exogenous variable, are included in Appendix E. The total effect column (D) is the sum of direct and indirect effects. The non-causal or spurious effects reported in column E are derived by subtracting the total effects from the total covariance.

Upon inspection of the decomposition table, it is evident that the greatest indirect effects ($> .100$) in this model occurred between supportive caring and psychological distress. Another high indirect effect was noted between supportive caring and coping effectiveness. This indicates that supportive nursing behaviors tend to influence mediating processes (cognitive appraisal and coping strategies) which subsequently effect the level of the patient's psychological distress and degree of perceived coping effectiveness.

As is evident in the simplified path diagram, the model includes all but one factor (physical caring). In addition to the two high indirect effect trends ($> .100$), the model had 28 high total direct effects, and 16 of these were significant. Two other direct pathways that did not meet probability criteria ($p \leq .053$) established a trend. The other ten pathways with high total direct effect trends ($> .150$) that were calculated in the decomposition analysis

will be included in the discussion of the hypotheses.

Testing of the Hypotheses

Further examination of the results by hypothesis indicates that seven of the 14 research hypotheses concerning direct effects between variables were supported. All but two of these were in the specified direction for direct effects in the revised, simplified model, while two others had mixed effects due to the multidimensionality of the caring concept. The data also supported two of the seven hypothesized indirect effects and three new direct pathways in the model that were not originally proposed. All variables, with the exception of physical caring, remained in the simplified version of the model (see Figure 4). A minimum level of significance, $p \leq .05$, was set to test the hypotheses; however, as previously noted, two trends ($p \leq .053$) emerged between variables in the first and second time orderings and the mediating processes. These trends will be discussed in relationship to the hypotheses. After restating each hypothesis, the non-supported portion will be presented first, followed by data which confirms the original hypothesized model.

Exogenous variables in the first time-ordering. The first two hypotheses address the effects of the three exogenous variables, including the two types of the desire for control over health care (cognitive and behavior-related control) and self-esteem levels. These two hypotheses will be considered separately.

There was partial support of the first hypothesis, which stated that the desire for control will have a direct negative effect on patient perceptions of caring, a direct positive effect on coping strategies, psychological distress, and overall coping effectiveness and indirectly affect cognitive appraisal through humanistic caring. There were no significant path coefficients between the two types of desire for control and psychological distress or coping effectiveness; however, high total effects were noted in the decomposition table for psychological distress. The data also failed to support a strong, indirect hypothesis to cognitive appraisal. This hypothesized indirect pathway had meager support, since the desire for control over health care had minimal total effects on primary and secondary cognitive appraisals when the indirect effects of patients' perceptions of caring support by nurses were taken into account (see Table 10).

The patient's desire for information (cognitive control) did support the hypothesized direct effect on supportive caring by nurses; however, the effect was positive, not negative ($b = .22$, $p \leq .05$), and accounted for only 6% of the SNBC variance (Figure 4). Significant direct effects were also noted between both types of desire for control over health care (cognitive and behavior control) and two dimensions of coping strategies, problem- and spiritual-focused coping, respectively. In addition, as indicated in the decomposition analysis (Table

10), trends in high total effects were noted between cognitive control and two other variables, physical and interpretive caring, and between behavior control and emotion-focused coping. Thus, both types of control had an impact on caring and coping indices but not all of these effects met minimal probability levels.

The influence of the other exogenous variable, self-esteem, was also evaluated. There was no support for the second hypothesis concerning the direct effects of self-esteem on humanistic caring, coping effectiveness, and psychological distress or its indirect effects on cognitive appraisal and coping strategies. Instead, there was a new direct negative effect established between self-esteem and emotion-focused coping strategies ($\beta = -.36$, $p \leq .001$). In addition, there was a direct negative trend established between self-esteem and primary cognitive appraisal, as evidenced by the beta weight of $-.18$ ($p = .053$).

Thus, the exogenous variables had only one significant path coefficient to supportive caring while all three variables directly affected the three coping strategy dimensions. The caring variables, in the second time ordering, will be discussed next.

Hypotheses regarding caring effects. All but one of the direct and indirect caring linkages established in the third hypothesis were supported by the data. The third hypothesis stated that caring will have direct negative effects on cognitive appraisal, coping strategies, and

psychological distress, and a direct positive effect on coping effectiveness. The hypothesized indirect effects between caring, psychological distress, and coping effectiveness through cognitive appraisal and coping strategies were upheld in the analysis. Only one direct effect between caring and psychological distress was not supported by the data. However, it should be noted that supportive caring did have high total effects on psychological distress in the decomposition table. The data supported the opposite of the hypothesized direction of some pathways; these will be noted below.

Linkages were established between supportive caring and both types of cognitive appraisal; however, the direct effect was positive, not negative, as hypothesized. Trends also supported a high total effect between the more highly-rated sensitive and physical caring dimensions and secondary cognitive appraisal (Table 10).

Another pathway, the direct negative effects between caring and coping strategies, was only partially upheld. Both interpretive and spiritual caring directly affected spiritual coping efforts; interpretive caring had a direct negative effect ($b = -.29$, $p < .01$) while spiritual caring had a direct, positive effect on this same variable ($b = .33$, $p < .05$). Supportive caring also had a direct, positive effect on problem-focused coping ($b = .27$, $p < .01$). Thus, each type of caring seemed to influence specific coping strategies differently, and both positive

and negative effects were evident.

A trend was noted between the remaining caring dimension, sensitive caring, and spiritual coping that did not meet minimal probability levels ($b = .23$, $p = .051$). Caring also influenced variables in the fourth time ordering. Two of the caring variables, supportive and sensitive caring, established direct, positive pathways to coping effectiveness, as hypothesized ($b = .30$, $p < .001$; $b = .26$, $p < .05$, respectively).

Overall, there were strong relationships established between caring and other variables. Only emotion-focused coping and psychological distress did not have direct linkages to one of the caring dimensions. The third time ordering will be discussed next.

Mediating process results. The last two hypotheses, which describe the proposed relationships between third and fourth time orderings, were partially supported. The fourth hypothesis concerning the direct positive effect of cognitive appraisal on coping strategies and indirect effects on coping effectiveness and psychological distress was partially upheld. The primary cognitive appraisal dimension had a direct positive link to emotion-focused coping ($b = .24$; $p < .01$). There was also support for the other component of this hypothesis since cognitive appraisal indirectly affected coping effectiveness through the link between coping and this final outcome variable. Although the total effects (from the decomposition table)

between coping effectiveness and primary cognitive appraisal are minimal, strong potential indirect pathways between these two variables were indicated in the simplified model.

Instead of an indirect link between cognitive appraisal and psychological distress, a new direct pathway was established ($\beta = .24, p < .05$). Another new pathway was also evident between psychological distress and coping effectiveness ($\beta = -.19, p < .05$). These may enhance the indirect effects between cognitive appraisal and coping effectiveness.

The fifth hypothesis refers to the direct negative effects of coping on psychological distress levels and direct positive effects on patient perceptions of coping effectiveness. This hypothesis was partially supported. There was no direct link established between coping and psychological distress, although the decomposition table indicated that high total effects were present for some of the coping dimensions. The second portion of this hypothesis was partially supported. Problem-focused coping had a direct, positive effect on effective coping outcomes ($\beta = .56, p < .001$), while emotion-focused coping had a direct negative effect ($\beta = -.32, p < .01$). The decomposition analysis also indicated high total effects between spiritual coping and coping effectiveness.

Over 40% of the variance of coping effectiveness was explained by the two caring scales (supportive and

sensitive caring), two of the coping dimensions (problem- and emotion-focused), and decreased psychological distress. Table 8 summarizes the other regression coefficients for the dependent variables in the simplified model. Supportive caring and secondary appraisal had the least amount of explained variance, while emotion-focused coping and coping effectiveness had the greatest explained variance. The adjusted R^2 for these two variables were .28 and .40, respectively. Power analysis to confirm statistical significance was calculated. Given that 40% of the variance of the final outcome variable was explained by 13 predictor variables in the simplified model with a sample size of 117, a power greater than 97% was obtained (Cohen, 1977), indicating that the model has substantial predictive power.

In summary, there are 16 direct effects predicted by the revised, simplified model, including three new pathways. The exogenous variable hypotheses had the least support, especially those related to the direct effects on variables in later time orderings. None of the self-esteem hypotheses were accepted; however, a strong inverse pathway with emotion-focused coping was established. Caring variables accounted for significant amounts of the variance in subsequent factors. Only one dimension of caring, the physical component, was not included in simplified model. Most of the hypotheses concerning the mediating processes and the two outcome

variables were also upheld. In particular, sensitive and supportive caring, problem-focused and emotion-focused coping, and the lack of psychological distress were strong predictors of patient perceptions of coping effectiveness.

Age Differences in Variables of Import

In addition to establishing relationships between previously-theorized variables, a second purpose of the study was to examine the effect of age-relevant group differences on predictor and outcome variables. Manova statistical assumptions were partially met. Dependent variables were interval level, and normal distribution was affirmed following data transformation, as previously discussed. The independent, random group comparison assumption was not met (Munro et al., 1986), however this procedure tends to be robust to assumption violations (Volicer, 1984).

Age group differences were based on the median age of this sample, 47.5 years, and significant differences between younger and older groups were evident in variables in the first three time-orderings. As is evident in Table 11, younger patients tended to have stronger preferences for information (desire for control) and had higher supportive caring ratings. The results of this analysis also considers one of the two ratings of supportive nursing behavior; the "importance" of this type of caring to the patient. This suggests that supportive caring by nurses is more highly valued by younger participants. One mediating

Table 11

Effective Age Differences on Variables of Import

Scale	Respondents <47.5 Years of Age (n=59)		Respondents >47.5 Years of Age (n=61)		F
	Mean	S.D.	Mean	S.D.	
Behavior Control Over Health Care (KHOS)	12.49	2.49	11.61	2.85	3.72 ⁺
Cognitive Control Over Health Care (KHOS)	12.44	1.82	11.21	2.15	10.23**
Overall Rating of Supportive Caring (SNBC)	7.45	1.55	6.42	1.85	15.63***
Ratings of Importance of Supportive Caring (SNBC)	5.29	1.04	4.45	1.28	10.74***
Physical Caring (HCI)	3.33	0.43	3.09	0.50	6.96**
Secondary Cognitive Appraisal (SAS)	7.37	3.65	5.97	2.92	5.96*

* $p \leq .05$ ** $p \leq .01$ *** $p \leq .001$ + $p = .056$

variable, secondary cognitive appraisal, also was scored higher by younger patients, indicating that these patients could visualize using various alternatives to deal with actual or potential threat of noncaring interactions while hospitalized (Folkman et al., 1986).

Post-hoc Analysis

Other factors which were previously shown to influence ratings of others include self-esteem and pain perceptions. Self-esteem groups were divided along the median for this sample (33.1), and pain differences were compared as to whether the patient reported more than moderate, minimal, or no pain. Self-esteem group differences will be discussed first.

Effects of varying self-esteem levels. Prior to examining differences based on the self-esteem median, it should be noted that this sample did not have large variations in self-esteem levels (range = 21-40), with 50% of the group scoring over 33. These levels are quite high when compared to previous research. In a study by Ward (cited in Mangen & Peterson, 1982) using the same SES scoring system, the mean level of self-esteem was 29.7 (s.d. = 3.07), whereas in this study it was 33.38 (s.d. = 4.58), with a possible total score of 40. Therefore, the differences in self-esteem based on the median score of this sample must be interpreted cautiously in view of the fact that only 13% of the patients had scores below the 29.0 score level. Most were within 11

points of the highest possible score.

Table 12 depicts the results of this analysis. The group with lower levels of self-esteem, based on a median score of 33.1, used more emotion and spiritual-focused coping, perceived more threat and experienced more psychological distress than those with higher self-esteem scores. The group with higher levels of self-esteem used fewer emotion-focused coping strategies and had less psychological distress. A trend ($p = .07$) also indicated that high self-esteem individuals reported higher levels of overall coping effectiveness. In addition, preliminary analyses indicated that this was a main effect of self-esteem on these variables since examination of caring covariance did not reach minimal probability levels.

Effects of varying amounts of pain. The influence of pain on respondents' answers was also examined through post-hoc analysis since patients with more than moderate pain were included in data analysis. The respondents with more than moderate pain levels were allowed to enter the study based on their consent to participate. Many had chronic pain, such as that associated with back problems, and some stated that they were unable to differentiate emotional from physical pain. As previously discussed, most patients ($n = 77$, 65%) reported no pain, 27 (22%) reported minimal pain, and only 16 (13%) described their pain above moderate levels. In order to equalize group sizes to meet Manova requirements, the "no pain" group only included the

Table 12

The Effect of Differences in Self-Esteem Levels on Mediating Processes and Psychological Distress

Scale	Self-Esteem Level <33.1 (n=63)		Self-Esteem Level >33.1 (n=57)		F
	Mean	S.D.	Mean	S.D.	
Primary Cognitive Appraisal	18.33	8.78	15.09	4.42	6.50*
Emotion-focused Coping	49.57	10.97	41.98	10.23	15.26***
Spiritual-focused Coping	8.76	2.63	7.26	3.19	7.93**
Psychological Distress	1.32	0.33	1.19	0.28	6.41*

* $p \leq .05$ ** $p \leq .01$ *** $p \leq .001$

first 22 subjects who reported no discomfort.

Group differences were evident between those experiencing high pain and the other two groups (minimal or no pain). These differences included varying perceptions of caring by nurses, use of coping strategies, and resultant psychological distress. Table 13 indicates that patients with moderate to high pain levels tended to have higher ratings of the frequency of supportive caring and spiritual caring by nurses than those without pain. However, the total SNBC score was not significantly higher with this group, indicating that, regardless of the amount of pain, other patients continued to value and receive supportive caring from nurses. The patients with high pain levels also tended to use more emotion- and spiritual-focused coping strategies, and reported higher levels of psychological distress.

In summary of the Manova analyses, three variables were found to influence respondents' ratings. Two of these, younger age and reports of more than moderate pain, tended to increase patient ratings of caring from nurses. In addition, differences in the scores of the mediating processes was evident. Younger patients had higher levels of secondary cognitive appraisal and patients with lower self-esteem levels tended not to use problem-focused coping strategies. Increased levels of psychological distress, while low for this sample on the whole, was greater in those with higher pain or lower self-esteem.

Table 13

The Effect of Pain on Patient Perceptions of Caring, Coping, and Psychological Distress

Scale	Denied Pain (n=22)		Minimal Pain (n=27)		Moderate Pain (n=16)		F
	Mean	S.D.	Mean	S.D.	Mean	S.D.	
Frequency of Supportive Caring Behaviors (SNBC)	3.83*	1.4	3.75	1.4	4.69*	1.1	4.17*
Spiritual Caring (HCI)	2.19	0.6	2.13*	0.6	2.50*	0.5	4.16*
Emotion-focused Coping (CSI)	42.09**	10.4			55.00**	7.7	6.50**
			44.07**	11.24	55.00**	7.7	9.34**
Spiritual-focused Coping (CSI)	7.05*	2.9	7.74	2.8	9.50*	1.9	3.19*
Psychological Distress (BSI)	1.19*	0.3			1.40*	0.3	4.67*
			1.21**	0.2	1.40**	0.3	7.06**

*p≤.05

**p≤.01

Summary of the Results

The original theoretical model explained patient influences and reactions to caring from nurses while hospitalized. All of the original variables, except one of the holistic caring dimensions (physical caring), were retained in the simplified model. The exogenous variables tended not to explain the variance of caring variables to the extent that was originally proposed. However, some of the demographic data, specifically cohort age groups and pain levels, did have an impact on these variables. Ratings of caregivers directly influenced all of the other third and fourth time ordered variables except for emotion-focused coping and psychological distress. The variables in this model were shown to account for a great deal of patients' overall coping effectiveness while hospitalized. The discussion of these results and implications for nursing will be discussed in the final chapter.

Chapter Five

Discussion

This study uncovered selected influences and consequences of humanistic caring from a stress-coping theoretical perspective. A path-analytic model indicated that perceptions of caring from nurses are affected by patient information needs which, in turn, influence other patient outcomes, such as threat appraisal and coping techniques and outcomes. Coping effectiveness was strongly predicted by supportive and sensitive caring, problem- and emotion-focused coping strategies and the absence of high psychological distress levels with this sample of adult, medically-treated, hospitalized patients. Thus, the revised, simplified model indicates that caring from nurses influences hospitalized patients' situational appraisal, coping methods, and immediate psychological outcomes. In addition, two dimensions of caring had positive, direct effects on patient self-reports of coping effectiveness (well-being and overall level of functioning).

This path analysis research supports those aspects of the psychological domain of Lazarus and Folkman's (1984) stress-coping theory that deal with patient interaction with potentially stressful and relatively unfamiliar health care professionals in hospital settings. The results indicate

the clinical relevance of this theory for nurse-patient relationships since personal and interpersonal causal antecedents helped to explain patients' use of mediating factors and immediate outcomes while hospitalized. The results also support previous nursing studies, which primarily linked one of the causal antecedents, positive caring perceptions, to the use of specific coping methods and satisfactory outcomes (Benner & Wrubel, 1989; Drew, 1986). Rather than concentrating on extremes of caring and noncaring from nurses, this study was unique in that it linked important personal factors that are relevant to moderate levels of humanistic caring and considered the specific types of coping strategies that patients use to deal with nurse interactions and the resultant psychological effects and perceptions of coping effectiveness. The theoretical framework was confirmed by data that supports the interrelatedness of all of these variables.

The conceptual framework of the original over-identified model was based on previous research, and all but one of the variables were retained. The physical caring dimension was eliminated from the empirical model because it demonstrated poor predictive validity with subsequent variables. This may have been due to the fact that the low acuity of this sample did not necessitate a great deal of physically-oriented interventions. In previous studies, surgical patients had the highest

expectations for physically-related care and rated it as more important than interpersonal components of their interactions with nurses (Gardner & Wheeler, 1987). This sample of medically-treated patients primarily utilized interpersonal, socio-emotional aspects of caring during their encounters with nurses. However, physical caring was found to have a weak positive influence on secondary appraisal. Even though a stronger relationship was not found, further investigation with another population may be warranted since other studies have suggested that there is a reciprocal relationship between task-oriented (physical needs) and emotional components of health care provider-patient interactions (Hall et al., 1988).

Caring is a central concept of this model. Participants were asked to recall the nurse who had the greatest effect on them and most chose positive encounters. The results indicate that moderate levels of humanistic caring were evident. The physical and sensitive caring dimensions were more evident than interpretive and spiritual caring. The lack of high levels of interpretive caring supports previous interpersonal research of nurses (Hills & Knowles, 1983). The model further suggests that the minimal amount of spiritual caring from nurses reported by patients was the only caring factor that positively affected their use of spiritual coping. This may have contributed to the inability of spiritual-coping efforts to predict overall

coping effectiveness. Other caring influences and effects also helped to explain the complex relationships with other personal factors and coping methods and outcomes. Personal factors which influence caring while patients are hospitalized will be considered first.

The Influence of Selected Variables on Caring

Only one of the model's person antecedents was found to be connected to caring. This variable, cognitive control (patient information needs), explained slightly more than 6% of the variance in supportive caring. The desire for information, as a type of cognitive control, not only reflects self-care needs, but also influences patient expectations of professional health care providers (Krantz et al., 1980). Therefore, the positive relationship to humanistic caring indices supports previous research that suggests that when information expectations are fulfilled, patients are more satisfied and give higher ratings to the interpersonal competence dimensions of interactions with health care providers (Larson & Rootman, 1976). Other research has verified the cognitive control-health care provider evaluation link (Auerbach et al., 1983; Korsch et al., 1968). The high desire for control over health care through obtaining information reflects societal trends (Downie & Tefler, 1980), and conflicts with earlier studies that suggest less preference for control (DeWolfe et al., 1966). The data suggest that the need for information was satisfied,

and resulted in patient appreciation of other caring attributes.

Other demographic variables outside the parsimonious model also affected patients' caring perceptions of nurses and related variables. Younger patients had higher desires to control their health care, valued caring from nurses, gave better caring evaluations of these care providers, and were able to visualize more alternatives to deal with potential threat (secondary cognitive appraisal). Other studies of caring have indicated that younger patients tended to place a higher value on caring nursing behaviors (Brown, 1981). The results imply that younger patients' higher desire for control tends to increase the preference for patient participation and a more egalitarian relationship with health care professionals.

The amount of pain also influenced patient ratings of caregivers. Patients with increased pain reported more frequent supportive nursing interventions and felt that nurses provided more spiritual caring than those with little or no pain. This may be related to nursing attitudes about taking care of patients with a great deal of pain. In another study, nurses reported feeling more needed and appreciated when they could concretely contribute to a patient's immediate well-being, such as relieving discomfort (Baer & Lowery, 1987).

The Influence of Caring on Criterion Variables

All other criterion variables in the model were directly affected by caring, with the exception of emotion-focused coping and psychological distress. Instead, supportive caring had indirect effects on both of these variables; e.g., supportive caring directly affected primary appraisal of threat which then influenced both emotion-focused coping and distress levels.

Threat appraisal and mediating processes. Supportive caring accounted for 8% of the variance of primary cognitive appraisal (threat) which then had indirect, adverse effects on coping effectiveness levels through emotional coping. It should be noted that overall threat perceptions were quite low and generally reflected the "did not apply" category; on rare occasions people indicated that it "sometimes applied." In addition, the relatively high self-esteem levels of this sample may have attenuated their perception of threat since self-esteem tended to have an inverse effect on threat levels. Healthy, low self-esteem individuals have been previously reported to perceive increased threat in other stressful situations as well (Folkman & Lazarus, 1980). This confirms the self-consistency theory that is often used to explain ways in which self-esteem is maintained or lost (Wylie, 1979). Although caring by nurses was viewed positively, the moderate ratings that were present do not reflect a high level of perceived caring. Thus, threat

may still be an issue in caring encounters with nurses that only meet patients' minimal expectations.

This group also had high control desires (e.g., the need to be kept informed). Thus, the threat perceived by this sample may have been due to the inherent knowledge inequity present in professional-recipient relationships (Gallagher, 1978). The inappropriate use of interpersonal techniques by nurses may provide a second explanation of this indirect link between control, caring, and appraisal. Many studies have questioned if nurses' interpersonal techniques are used appropriately or exemplify a caring attitude (Flaskerud et al., 1979; Hills & Knowles, 1983). In addition, the Auerbach et al. (1983) study indicated that increased levels of threat and distress were apparent if interpersonal aspects of the situation do not meet patient expectations. Threat may also be increased if more frequent supportive nursing interventions are misinterpreted as a reflection of a more serious degree of illness.

In addition, the primary cognitive appraisal measure was limited to threatening aspects of the situation, and did not consider patient perceptions of the relevancy or the beneficial components of the situation that may also be important during caring interactions (Folkman et al., 1986). However, the explanation of even low levels of threat as a result of caring by nurses may influence the number of alternative coping options that can be used in

these situations. The effect of caring on secondary cognitive appraisal may help to establish how people viewed these alternatives after interacting with nurses.

Secondary cognitive appraisals had higher ratings than primary appraisal, with mean scores approaching the "sometimes applies category." The positive effect of supportive caring on secondary appraisal and another trend between sensitive caring and secondary cognitive appraisal indicate that although the patients perceived more threat, they were also able to identify a larger number of available coping options that could be used during encounters with noncaring individuals. Thus, although low levels of threat were perceived, the results indicated that supportive caring also increased patient perceptions of the number of available coping options.

Of the four SAS items, the inability to change the current situation received the highest mean SAS scores. Decreased changeability of a stressful encounter has been shown to increase the use of emotion-focused coping strategies with a healthy population (Folkman et al., 1986). Use of more emotionally-oriented coping was also evident when threat was increased with this sample of acutely-ill adults. Drew's (1986) study of health care recipients also determined that perceptions of the degree of threat and the lack of suitable coping alternatives increased patient's use of emotion-focused coping strategies when dealing with health care professionals.

Specifically, patients reported that they withdrew, felt angry or minimized the negative encounter.

Several caring dimensions had strong effects on the types of coping strategies used by patients. Even the less evident types of caring enhanced patient use of more positive problem- and spiritual-focused coping methods. Through coping strategies, caring was also shown to strongly influence improved coping effectiveness. These results support another process-oriented caring-coping study in which the outcomes of even vague feelings of depersonalization and exclusion (as a person) were dependent on coping efforts (Drew, 1986). Another similarity between these two studies is the lack of a direct link between moderate levels of caring and emotion-focused coping efforts. Emotion-focused coping efforts are more frequently used by patients in noncaring cases where threatening encounters increased feelings of being excluded or disconfirmed as a person.

It should be noted that spiritual coping was affected differently by two dimensions of caring. Caring for patients' spiritual needs enhanced spiritual coping, while interpretive caring had an inverse effect. Even minimal interpretation of illness by nurses and the impact of disease seems to decrease patient use of spiritual coping strategies. The trend between high control desires and interpretive caring indicates that the interpretive component of caring tends to lighten the burden of the

illness and solidifies patient expectations which could decrease fear of the unknown and resultant distress (Mishel, 1984).

On the other hand, nurse sensitivity to the patient's situation also tended to increase spiritual-focused coping and further underscored the importance attached to the spiritual needs of this moderately religious/spiritual group. Caring has been called "a profound act of hope," signifying that caring, in and of itself, is energy-producing and spiritually beneficial (Benner & Wrubel, 1989, p 404; Drew, 1986).

Other influences on coping strategies. Caring was intricately related to coping efforts, however, two other person variables, desire for control and self-esteem, also helped to explain patients' use of specific coping strategies. In this model, participants with high desires for control used two of the more positive coping methods, while those with low self-esteem used more emotion-focused coping methods. The first positive link between the desire for cognitive control and coping, when combined with supportive caring, explained 14% of the variance of problem-focused coping. The need to use this form of coping may reflect patients' relative lack of control during hospitalization (Raps, Peterson, Jonas, & Seligman, 1982).

Another study verifies the increased use of problem-focused coping methods when patients could not meet

a desired level of control over aversive events (Solomon et al., 1980). This study supports previous work (Folkman & Lazarus, 1985) which indicates that multiple forms of coping assist with positive outcomes. However, this study identified that emotion-focused coping was not effective in dealing with nurses while hospitalized. Other person variables (e.g., self-esteem and the desire for control over health care) helped to explain these divergent findings.

The first of these person variables, self-esteem, helped to explain the use of the less effective emotion-focused coping strategies in this sample. Those with low self-esteem tended to use emotion-focused strategies, which, according to the data, resulted in decreased levels of coping effectiveness. Self-esteem, when combined with threat appraisal, accounted for 28% of the variance in the use of emotion-focused coping strategies. Those with lower self-esteem in this sample also had higher threat appraisals and psychological distress levels. On the other hand, the data indicates that those with higher self-esteem levels in this sample tended to be less emotionally-focused in their coping and perceived better outcomes. This link between self-esteem and emotion-focused coping was supported in a previous study of health care provider encounters (Drew, 1986). In other studies, personality traits, such as individuals' feelings about themselves, were found to

influence cognitive appraisals of potentially threatening situations (Holahan & Moos, 1985; 1986).

The other person variable, the behavior-oriented desire for control dimension, accounted for differences in the use of spiritual coping. Behavior control reflects a self-reliant attitude. This may be thwarted by hospital rules and regulations, illness, or the unequal professional provider-recipient relationship (Gallagher, 1978). Additionally, behaviors indicative of situational control, as described by Dennis (1987), may be difficult to achieve in today's short-term, economically-driven hospital environment (Matthews, 1983). This group of relatively self-reliant patients may have increased needs for spiritual assistance, in addition to human assistance (e.g., professional information). This is further reinforced by the trend that indicated that those with high behavior control tendencies tend to also use more emotion-focused coping as a way of handling relatively rigid hospital-based nursing care regimens, e.g., staffing patterns and assignment of nurses to their care.

Finally, the immediate outcomes of causal antecedents and mediating processes were determined. Two interpersonal caring dimensions also had direct, positive effects on coping effectiveness levels while hospitalized.

Immediate Effects. While the data indicated the positive effects of caring, it did not support a number of hypothesized direct influences of predictor variables on

the final outcome variables. For example, the simplified model does not have direct links between control-psychological distress and control-coping effectiveness. Instead, the study supports indirect effects between these variables since both the influence of the desire for control on mediating process variables and the direct effect of control on supportive caring ultimately affected psychological distress levels and coping effectiveness. Previous research supports these indirect effects on coping outcomes (Folkman et al., 1986). Caring and mediating process variables also directly affected the immediate outcome variables in this study.

Sensitive and supporting caring by nurses directly increased patient perceptions of effective coping. Thus, even moderate levels of caring were beneficial. Other indirect effects of caring through problem-focused coping were also evident.

The simplified model indicates that problem- and emotion-focused coping strategies influence coping effectiveness but that problem-focused strategies have a more beneficial, positive effect on this outcome. Other research has shown that patients with burn injuries who used problem-focused coping methods tended to adjust better (Roberts et al., 1987). However, this sample used proportionately more emotion-focused strategies than problem- or spiritual-focused strategies when dealing with

caring from nurses. The increased use of emotion-focused coping in threatening situations has been previously described for healthy individuals (Folkman et al., 1986). So, even though problem-focused methods predicted better outcomes and were directly affected by the supportive caring dimension, emotion-focused strategies were used in encounters that were perceived as being threatening. As previously discussed, the threat from these interactions tended to increase with lower levels of self-esteem.

Although there was a problem-focused coping-distress trend, the coping strategies-psychological distress link was not established by this study. Only small amounts of variance of coping were previously reported in stress appraisal research with acutely-ill patients (Roberts et al., 1987). Instead, psychological distress had an adverse effect on coping effectiveness, and became one of five variables that helped to explain coping effectiveness variance.

Strengths and Limitations

Internal Validity

The relationships in the simplified model are plausible. Many of the hypotheses were supported by data, and others have theoretical- and research-based credibility. As indicated earlier, the final path analytic diagram supports Lazarus and Folkman's (1984) stress-coping theory.

Although nonprobability sampling was used, the

data-gathering process is appropriate to the application of these results to hospital-based nursing care of medically-treated patients. Instrument validity and reliability met high standards. Operationalization reflected conceptual definitions and these were applied consistently throughout the study.

It is assumed that participants gave accurate self-reports of their impressions of nurses. The length of the questionnaire packet may have increased response set or fatigue, although it is believed that allowing the patients to keep the packets overnight helped to decrease these adverse effects. No complaints were registered in the post-completion interviews. The sample that was used is consistent with that implied by the problem. Extraneous variables were controlled by strict inclusion criteria and comparison of group differences in areas previously shown to influence stress-coping reactions. Sample size was adequate according to statistical power analysis procedures (Cohen, 1977).

Statistical analysis procedures were appropriate to the methodology. Outliers were deleted to increase the predictive power of the model. The path diagram, explanatory tables, as well as an in-depth discussion, clearly indicated the direction and statistical significance of the effects of each of the variables. SPSSX (1988) was used to analyze the data. Logarithmic transformations of data were completed in order to meet

statistical assumptions of linearity and normality.

Previous research confirms most of the suggested relationships resulting from data analysis techniques. Possible rival explanations include history (time to complete the instruments) and maturation (fatigue concerns). Other potential explanations relative to the data collection procedure were carefully monitored by biweekly meetings with those participating in questionnaire distribution. The manner of approaching the patient and the way in which the questionnaire packet was presented was rehearsed, and return demonstrations were monitored on a regular basis to ensure similarity of approaches.

The above considerations indicate that the study has strong internal validity (Krathwohl, 1985). The model suggests the importance of factors which influence and result from caring in nurse-patient relationships.

External Validity

External validity is limited in scope in order to emphasize high internal validity for relationships in this newly-proposed model (Krathwohl, 1985, p. 130). The results are limited to inpatient populations of medically-treated adults in major medical centers. The results may not be applicable to less traditional health care provider relationships, small community facilities, or outpatient situations. The use of two closely-related facilities in the same vicinity with identical medical

training programs may also reflect different patient care standards than other geographic areas.

The sample was well-described, and the effect of demographic variables such as age, self-esteem, and pain levels were examined and found to be statistically and theoretically relevant. The study's explanation of generality may be restricted because of reactive effects since special attention to the participants may have inadvertently changed the way they interacted with professional health care providers. Nurse reactivity was avoided by not involving the nurses in data collection procedures, and the purpose of the study was not explained in detail until the conclusion of the research. Post-questionnaire interviews during the pilot study indicated that none of the patients felt threatened as a result of participation, and all but one individual understood the questionnaire instructions. As a result, the directions to one of the questionnaires were highlighted to emphasize that the items referred to the patient's reactions to nurse encounters, and pilot study questionnaires were discarded.

This research could be easily replicated to increase external validity, since subjects and hospital-based situations were well-described and are available. If replicated, different instruments may not produce the same results, and there is special concern for one of the humanistic caring measures. The SNBC was constructed to

reflect supportive nurse behaviors, and may not adequately measure caring by other health care providers. All of the instruments demonstrated good psychometric properties, had clear characteristics, and measured the constructs as defined. However, these same constructs may be tested using other methods since similar results were reported in other descriptive and phenomenologically-based studies of nurse-patient interactions (Anderson, 1981; Benner & Wrubel, 1989; Drew, 1986).

While random selection may have increased the external validity, its implementation would have extended the study indefinitely since many of the extremely ill, hospitalized patients who met other inclusion criteria could not participate. The strict inclusion criteria severely reduced patient eligibility but increased group homogeneity which may be viewed as a strength and a limitation. Even though spurious effects are reduced, the range of responses may be narrower than a more varied population.

Thus, this study had strong internal validity and limited external validity. These limitations include the nonprobability sampling and the limited type of setting used for data collection. In addition, although the questionnaire format may have been restrictive, patients were given an opportunity to discuss their feelings after questionnaire completion. The length of the packet may have altered responses of the participants, especially

since the fatigue factor may have encouraged response set.

Nursing Implications

Nursing Research Implications

Continued research of caring is necessary due to rapid societal and health care delivery changes (Downie & Tefler, 1980). Patients have higher demands for participation in their own health care and expect caring, accountable caregivers when seeking professional assistance. This study indicates that additional work is needed with caring measurement, personal factors that influence patient perceptions of caring, comparison of nurse and patient impressions of effective caring behaviors, and a greater emphasis on patient outcomes.

Continued refinement of caring concepts and measures would assist in verifying patient impressions, and clarify important antecedents and consequences of various degrees of caring as well as positive and negative interactions. This work should reflect both patient and nurse perceptions, even though the two are often discrepant (Larson, 1981). Accounting for the context of the interaction would also lend insight into these differences. An example of this refinement work with perceptions of caring may include investigation of nurses' concern for the spiritual needs of hospitalized patients. This sample reported moderate to high spirituality, and this may have increased the importance of this facet of care to these patients. Means to assess this concept in a

complete manner and determination of its relative importance to patients and nurse caregivers needs further investigation.

Delineation of patient expectations and other personal characteristics, such as self-esteem levels and pain thresholds, may assist caregiver interventions. Increased understanding of coping methods used to deal with threatening interactions and pain-related phenomena may be facilitated by an increased emphasis on outcomes which consider each strategy's effectiveness. The lack of high levels of humanistic caring that resulted in threat contributed to increased psychological distress and decreased coping effectiveness. Additional work which emphasizes the positive component of stress appraisal may be warranted in order to determine the benefit- and challenge-based interpretation of nurse-patient encounters (Pollack, 1989). Other socially-driven factors, such as the desire to participate in and make decisions about one's care need continued emphasis. Cross-sectional sampling designs should continue to consider cohort age group effects.

Nursing perspectives of caring may need to be grounded in practice, and a combined patient-nurse perspective would enhance understanding of the reciprocity involved in caring as well as the facilitators and barriers within and outside of nursing caregiving practices (Ashley, 1980; Lovell, 1980; Nowakowski, 1985).

Nursing attitudes toward various personalities and other patient characteristics may need to be elicited in combined nurse-patient interaction studies. Contextually-based studies which consider the environment of nursing practice are beginning to be conceptualized and measured (Fenton, 1987).

The study of outcomes of caring now primarily center on immediate reactions, however long range effects also need to be studied. These may include those resulting from enriched insights, increased self-actualization, self-discovery, self-connectedness, and a greater appreciation of many other aspects of life (Frankfurt, 1982; Mayeroff, 1971; Peplau, 1969). A focus on nurse outcomes may also help to emphasize personal growth related to caring for others.

Nursing Practice Implications

The study indicated that nurses need to be more aware of patient interpretations of their well-intentioned caring interventions. Given that moderate levels of supportive caring could be somewhat threatening to patients, an increased emphasis on the interpersonal component of patient interactions seems warranted. Specifically, this could include less advice and more reflection and a decreased emphasis on separation of socioemotional- and task-oriented nursing interventions (Hall et al., 1988; Hills & Knowles, 1983). Stronger nursing interpersonal competence may increase patient

ratings of caring and decrease the threat in these encounters. The many unique aspects of nurses' work, especially the barriers and facilitators to caring, also need to be clarified and dealt with in the clinical arena.

For example, hospitals have tended to block increased patient involvement and participation in acute health care due to the widespread increase in technology (Brallier, 1978). However, societal changes in relation to the public's increased health awareness and self-reliance indicate a need to change the current rigid hospital routines, limited visiting hours, and often forgotten family-based discussion and care.

Resources that are available to caregivers also need to be evaluated. The informal expectations between nurses working in a particular area should be supportive of caring activities. Formal recognition of caring activities is also long overdue (Benner & Wrubel, 1989; Leininger, 1986; Paulen & Rapp, 1981). Means to provide formal and informal support for nurses may help them with daily caring encounters, which can be emotionally- and physically-depleting. Descriptions of unique, beneficial caring encounters in the clinical area need to be shared with other nurses and rewarded.

Implications for Nursing Education

Education of future nurses will play an important part in the understanding and operationalization of caring. The study indicated that only moderate levels of

caring were perceived by patients, and some caring dimensions were barely evident. Nursing curricula do not routinely address caring as a unique nursing-based concept (Leininger, 1986). Changes in value systems may indicate the need to reemphasize the role of caring in nursing. The educational disunity in nursing further confounds this issue (Christman, 1983).

Since the motivation for caring is based on normative ethics (Fowler, 1987), additional emphasis on ethical decision-making based on clinically-relevant situations may assist in the operationalization of caring in practice. Education and practice with introspective techniques and critical thinking may further help define the actual or potential outcomes of caring. In addition, student development of increased awareness of personal attitudes toward health care recipients may assist their approach to patients.

Education may need to continue to emphasize nursing's history and methods that could be used to provide much-needed support and resources for caregivers. Barriers to the implementation of caring are present within the profession, and need to be addressed (Leininger, 1986). Increased public acknowledgement of nurses' work and responsibilities needs additional attention (Kalisch & Kalisch, 1986). Student laboratory situations can be used for role modeling and also as a way to investigate the results of obtaining and providing more support for fellow

nurses.

Summary

This correlational study focused on patient perceptions of caring and related these impressions to a stress-coping theoretical framework. Personal influences of caring evaluations of nurses and subsequent effects, such as cognitive appraisals, use of coping strategies, psychological distress, and coping outcomes, were ascertained. The resultant parsimonious, simplified model has substantive relationships that have theoretical and research support. The use of path analysis techniques indicate that moderate levels of caring, among other factors, tend to increase psychological distress levels if threat is present, but also increase the number of alternative coping options and enhance coping effectiveness. Internal validity and external validity concerns were addressed, and a high level of internal validity was evident for this initial study based on a stress-coping framework. Additional research is necessary to refine important concepts and confirm relationships. It was suggested that both nurse and patient perspectives of caring be simultaneously considered in future research and that the context of the situation receive additional emphasis.

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Appendix A

Research Supporting Relationships in the Proposed
Path Analytic Model

Desire for control and evaluation of health care providers

Cognitive dimension of the desire for control

Larson and Rootman, 1976

Linder-Pelz, 1982

Korsch, Gozzi, & Francis, 1968

Auerbach et al., 1983

Behavior dimension of the desire for control

Shiloh, 1972

Schorr and Rodin, 1982

Dennis, 1987

Desire for control and coping strategies

Padilla et al., 1981

Solomon et al., 1980

Dohrenwend and Martin, 1979

Jackson and Teasler, 1984

Desire for control and psychological distress

Johnson and Leventhal, 1974

Johnson, Rice, Fuller, and Endress, 1978

DeWolfe, Barrell, and Cummings, 1966

Mishel, 1984

Hills and Knowles, 1983

Desire for control and coping effectiveness

Auerbach et al., 1983

Dennis, 1987

Self-esteem and perceptions of others

Wylie, 1979

Ludwig, 1970

Hull, 1982

Self-esteem and coping effectiveness

Ludwig, 1970

Murphy, 1980

Jacobs, 1973

Drew, 1986

Self-esteem and psychological distress

Wilson-Barnett, 1976

Lucente and Fleck, 1972

Folkman and Lazarus, 1980

Humanistic caring and cognitive appraisal

Wilson-Barnett, 1976

Flaskerud et al., 1979

Hardin and Halaris, 1983

Hills and Knowles, 1983

Latham, 1988

Hall et al., 1988

Humanistic caring and coping strategies

Auerbach et al., 1983

Drew, 1986

Anderson, 1981

Humanistic caring and psychological distress

Drew, 1986

Riemen, 1986

Brown, 1981

Henry, 1975

Humanistic caring and coping effectiveness

Drew, 1986

Riemen, 1986

Hall et al., 1988

Auerbach et al., 1983

Dance and Larson, 1976

Kennedy and Garvin, 1984

Cognitive appraisal and coping strategies

Folkman et al., 1986

Folkman and Lazarus, 1985

Drew, 1986

Riemen, 1986

Wilson-Barnett, 1976

Coping strategies and psychological outcomes

Folkman and Lazarus, 1985

Roberts et al., 1987

Coping strategies and coping effectiveness

Pollack, 1986

McNett, 1987

Age and self-esteem

Hamacheck, 1978

Age and self-esteem (continued)

Marsh et al., 1984

Age and humanistic caring perceptions

Brown, 1981

Shiloh, 1972

Age and coping strategies

Putnam, 1987

Quayhagen and Quayhagen, 1982

Age and coping effectiveness

Volicer and Burns, 1977

Appendix B

Number _____

HOSPITALIZATION QUESTIONNAIRES

These surveys are being used to find out what you have experienced when getting help from nurses. Everyone has different needs while getting care, and different reactions. There are no right or wrong answers to these surveys. Answer each as honestly as you can. Your personal experiences are very important.

The study requires some background information, which includes checkmarks and some fill-in-the-blanks. The background information page is followed by surveys which are answered by placing checkmarks in the column corresponding to the appropriate answer. Please answer each question in relation to a specific registered nurse who took care of you during this hospitalization. If you have any questions while filling this out, you may call (213) 343-4700, and leave a message for Chris Latham. Include your room number or telephone number when leaving a message. Chris will get back to you at her earliest convenience.

The research team will make arrangements with you to pick up the survey. If you are discharged early, return the survey to the labeled boxes at the nursing desk on this floor. It will be picked up by the research team.

Thank you for your assistance. Your input is very important to this study.

Number _____

DEMOGRAPHICS: Background Information

Directions to these questions:

Place a checkmark or fill in the blank to each answer.

Hospital Day Number: _____

Reason for current hospitalization: _____

Birthdate: _____

Highest Level of Education Completed (Check one level):

- (1) Less than High School _____ (5) Diploma: _____
 (2) High School Diploma: _____ (6) Baccalaureate Degree: _____
 Post High School Education _____ Graduate School _____
 (3) Trade School: _____ (7) Masters Degree: _____
 (4) Associate Degree: _____ (8) Doctoral Degree: _____

Annual Family Income Level:

- (1) Less than 5,000 _____ (7) 51,000-60,000 _____
 (2) 5,000-10,000 _____ (8) 61,000-70,000 _____
 (3) 11,000-20,000 _____ (9) Over 100,000 _____
 (4) 21,000-30,000 _____
 (5) 31,000-40,000 _____
 (6) 41,000-50,000 _____

Number of Times Admitted to the Hospital This Past Year: _____

Ethnicity:

- (1) White: _____
 (2) Asian: _____
 (3) Black: _____
 (4) Hispanic: _____
 (5) Other (Write in): _____

Sex: (1) Female _____ (2) Male _____

Occupation: (Write in. Include previous occupation and "retired" or "disabled" if applicable: _____)

Marital Status:

- (1) Single, Never Married: _____
 (2) Married: _____
 (3) Widowed: _____
 (4) Divorced: _____

Years Married: _____

Number of Living Children: _____

Do you consider yourself to be:

- (1) Not religious/spiritual: _____
 (2) Slightly religious/spiritual: _____
 (3) Moderately religious/spiritual: _____
 (4) Very religious/spiritual: _____

Survey 1-3 ---

4-5 --

6-7 --

8-9 --

10-11 --

12-13 --

14 -

15 -

16 -

17 -

18-19 --

20-21 --

22 -

The measures used in this study were referenced in Chapter Three. These instruments may be obtained directly from the authors and are available for consultation at the University of San Diego Copley Library.

Appendix C

The Short Portable Mental Status
Questionnaire was referenced in
Chapter Three.

Appendix D

University of San Diego
and
Memorial Medical Center of Long Beach
Consent to Participate in a Research Study
Title: Questionnaires on Caring

I have been asked to participate in a study that uses questionnaires to consider factors related to patients' views of and reactions to interactions with nurses. The chief investigator, Chris Latham, is completing this project as part of a program of study at the University of San Diego, under the supervision of Dr. Mary P. Quayhagen. The co-investigator, Diana Field R.N., MSN, is a nurse educator at Memorial Medical Center.

I have reviewed the questionnaires on caring. My answers to these questions, along with any additional information I wish to volunteer may be used to explain the results. I am aware that the completion of the questionnaires may take approximately 30-45 minutes, and must be completed prior to discharge in order to be used in this study. Other than minor fatigue, participation in this study should not involve any risks or discomfort. The results will provide valuable information for nurses.

My participation in this study is entirely voluntary. I understand I may refuse to participate or withdraw at any time without any jeopardy to my care. I understand that all research information is kept completely confidential, and personal anonymity is maintained by using group data in the discussion of the results.

I understand what is expected of me, and all my questions have been answered. If other questions or concerns arise, I may call the chief researcher, Chris Latham at (213) 343-4700, or the co-investigator, Diana Field at (213) 595-3721. Since this proposal has been reviewed and approved by Memorial Medical Center of Long Beach committees composed of nurses, physicians, and lay persons, other questions regarding the conduct of this study can be directed to the Director, Department of Research Administration at (213) 595-3104.

There are no other agreements, written or verbal, related to this study beyond that expressed on this consent form. I have received a copy of the "Subject's Bill of Rights," and will receive a copy of the consent form.

I, the undersigned, understand the above explanations, and consent to voluntarily participate in this research.

(Patient's Signature)

Memorial Medical Center, Long Beach

(Date/Time)

(Researcher Signature)

(Date/Time)

Consent Form

UNIVERSITY OF CALIFORNIA, IRVINE
CONSENT TO ACT AS A HUMAN RESEARCH SUBJECT

Hospitalization Questionnaires
 TITLE OF STUDY

Christine L. Latham, University of San Diego (213) 343-4700
 NAME, DEPARTMENT AND TELEPHONE NUMBER OF INVESTIGATOR

You have been asked to participate in a research study which is exempt from review by a Human Subjects Review Committee. The purpose of this study, the terms of your participation, as well as any expected risks and/or benefits must be fully explained to you before you sign this form and give your consent to participate.

You should also know that:

1. Participation in research is entirely voluntary. You may refuse to participate or withdraw from participation at any time without jeopardy to future medical care, educational or employment status or other entitlement. The investigator may withdraw you from participation at his/her professional discretion.
2. If, during the course of this study, significant new information which has been developed during the course of the study becomes available which may relate to your willingness to continue to participate, this information will be provided to you by the investigator.
3. Confidentiality will be provided to the extent provided by law.
4. If at any time you have questions regarding the research or your participation, you should contact the investigator or his/her assistants who must answer the questions.
5. If, at any time, you have comments or complaints relating to the conduct of this research you may contact the Research Committees Office, 155 Administration Building, University of California, Irvine, Irvine, CA. 92717.
6. If this study is a medical investigation/experiment, you must also read and be given a copy of the Experimental Subjects Bill of Rights as well as a copy of this consent form to keep.

I consent to participate in this study.

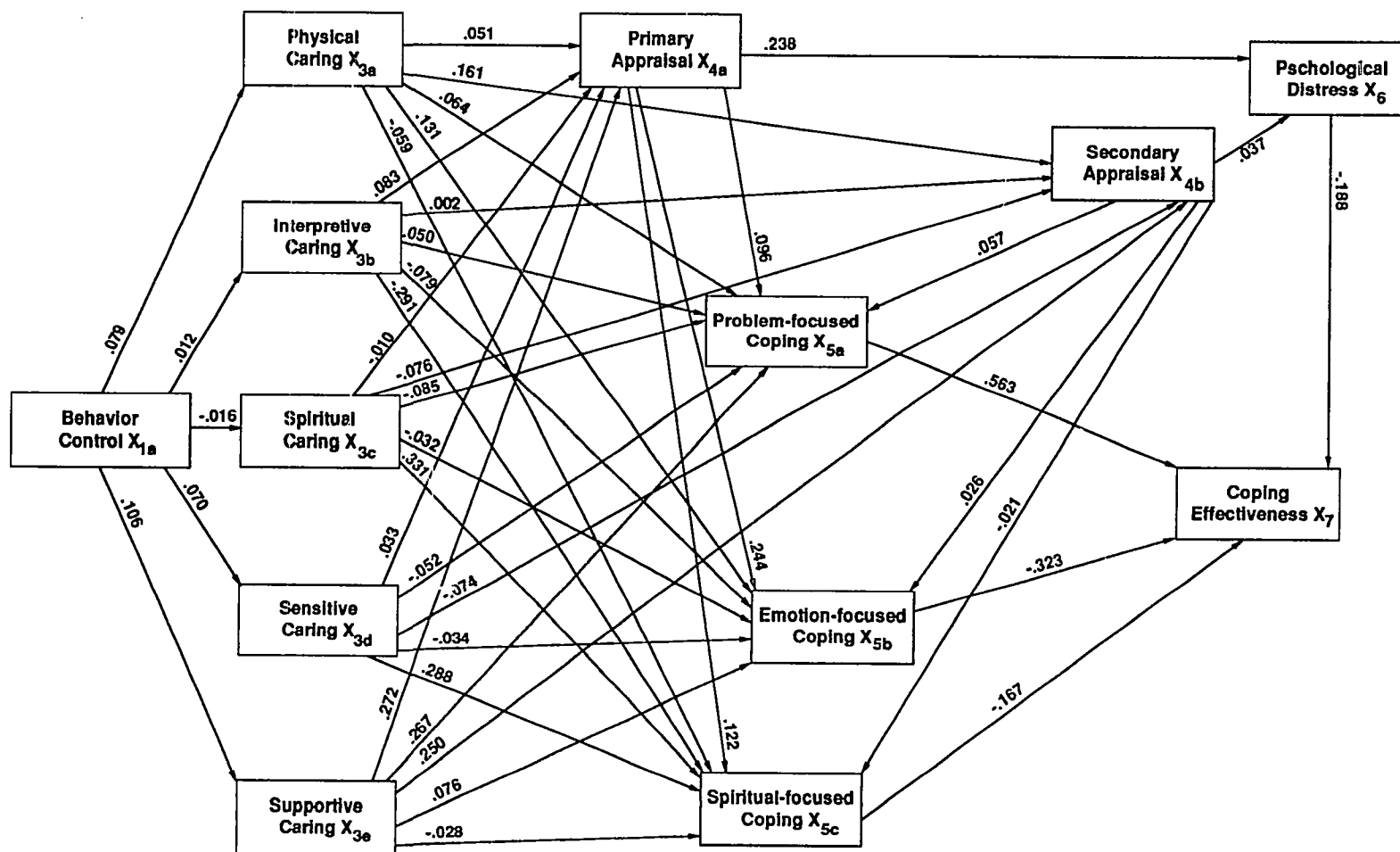
 Signature of Subject (Age 7 and older)

 Date

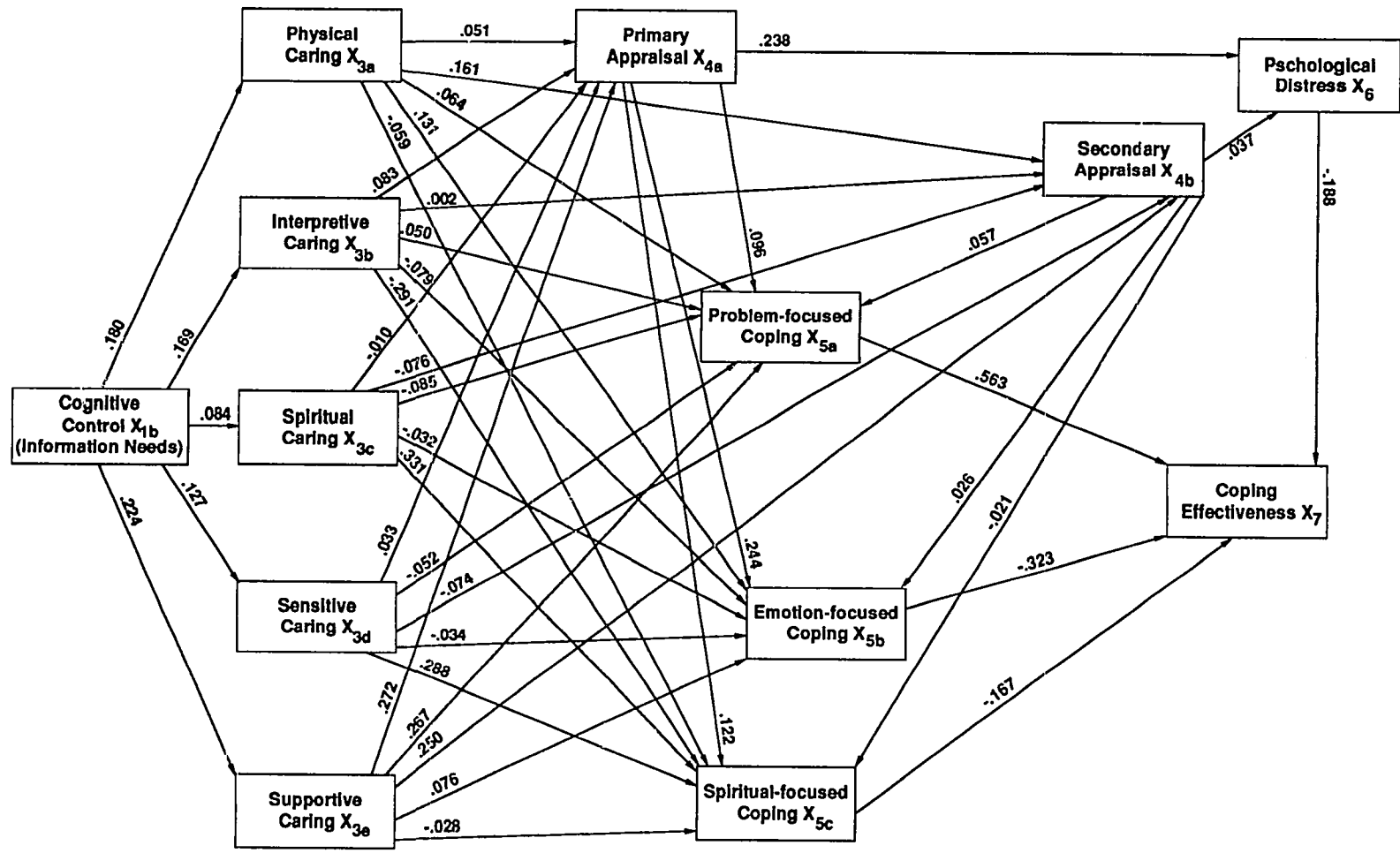
 Signature of Witness (Optional)

 Date

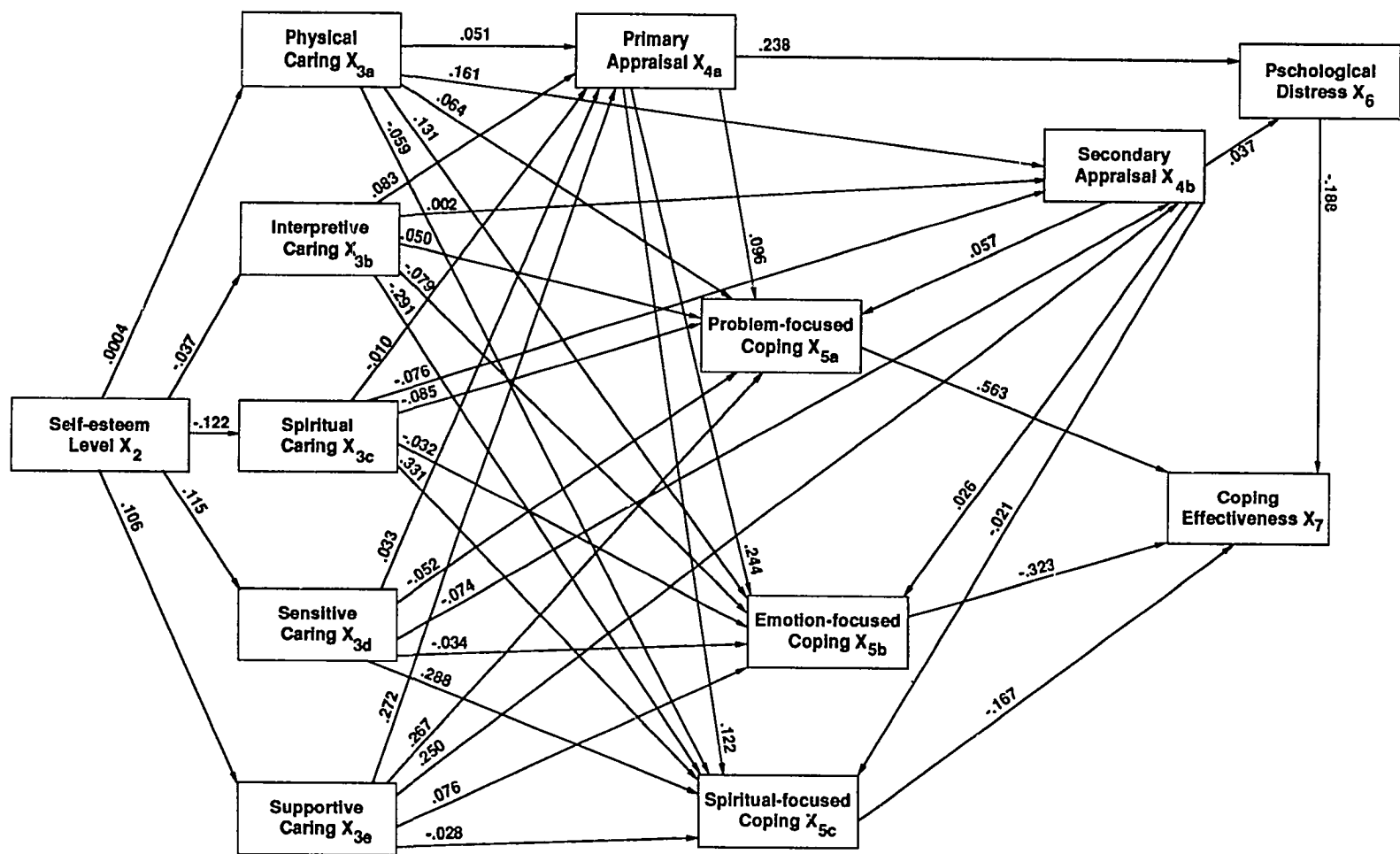
Appendix E



Indirect Effects of Behavior Control and All Other Predictor Variables on Coping Effectiveness



Indirect Effects of Cognitive Control and All Other Predictor Variables on Coping Effectiveness



Indirect Effects of Self-esteem Levels and All Other Predictor Variables on Coping Effectiveness